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ABSTRACT

This volume presents seven papers on topics about second language instruction, language research, and applied linguistics. titles include: "Grammar and Its Teaching: Challenging the Myths" (Diane Larsen-Freeman); "Cross-Cultural Writing and Rhetorical Styles: Toward a 'Socially Realistic' Contrastive Rhetoric" (Yamuna Kachru); "Mother, I'd Rather Do It Myself, Maybe: An Analysis of Voice-Onset Time Produced by Early French-English Bilinguals" (Molly Mack, Sandra Bott, Consuelo B. Boronat); "Symposium on Action Research: Introduction" (Numa Markee); "The Effect of Group Dynamics and Task Design on Learner Participation in Small Group Work" (Lori Chinitz); "Don't Judge a Book by its Cover: A Teacher's Perceptions and Misperceptions" (Jennifer Lai); and "The Process of Peer Feedback" (Timothy A. Noble). (MSE)

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IDEAL 8, 1995

GRAMMAR AND ITS TEACHING: CHALLENGING THE MYTHS

Diane Larsen-Freeman

A number of claims about grammar and its pedagogy in the language teaching field exist these days. Evidence is presented to justify designating ten of these claims as myths. After challenging these myths, I will offer an alternative view of grammar, one which is more consistent with the evidence.

INTRODUCTION

The word *grammar* is frequently misunderstood in the language teaching field these days. The misconception lies in seeing grammar as a collection of arbitrary rules about static structures in the language. Further questionable claims are that the structures do not have to be taught, that learners will acquire them on their own, or that if the structures are taught, the grammar lessons which ensue will be boring. As a consequence of these misconceptions, communicative and proficiency-based teaching approaches sometimes unduly limit instruction in grammar. In more extreme cases, methodologists claim that grammar teaching has no role whatsoever in language teaching pedagogy.

It is my opinion that both these positions, giving grammar short-shrift and ignoring it altogether, stem from a failure to understand grammar. What has contributed to this misunderstanding are what I call *myths*. There are many claims which deserve the *myth* designation. I propose to challenge ten of them here.

THE MYTHS

1. Grammar is acquired naturally; it doesn't have to be taught.

As with all myths, there is an element of truth to this claim. It is certainly true that some learners acquire the grammar of a second language naturally without instruction. There are immigrants to the United States, for example, who acquire proficiency in English on their own. This is especially true of young immigrants. However, we also know that this is not true for all learners. Among these same immigrant groups are learners whose language development becomes prematurely arrested, who perhaps achieve a degree of communicative proficiency, but whose English is far from accurate, or even sociolinguistically appropriate. Thus, a more important question to my mind than whether or not it is possible to acquire grammar naturally is whether or not it is possible with instruction to help learners who cannot achieve accuracy in English through untutored means?

Further, it is true that learning particular grammatical distinctions requires a great deal of time even for the most skilled learners. Long ago Carol Chomsky (1969), for example, showed that native speakers of English were still in the process of acquiring certain grammatical structures in English well into their adolescence. Thus, another question that is more important than whether it is possible to learn grammar without instruction is whether it is possible to accelerate students' natural learning of grammar through instruction?

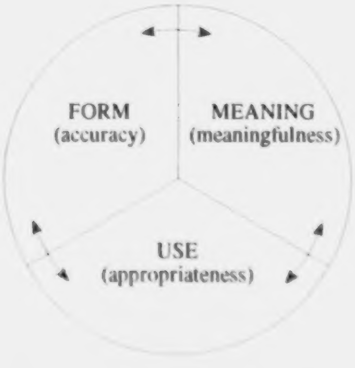
Relevant research findings can be brought to bear on this question from a variety of sources (See Larsen-Freeman and Long, 1991, pp. 312-315). To cite just one study, Pienemann (1984) demonstrated that subjects in his study who had begun at a stage where they were ready for the grammar instruction they received progressed to the next stage after a two-week period, a passage normally taking several months to traverse in untutored development. While the number of subjects studied by Pienemann was admittedly rather small, this finding, if corroborated, certainly provides evidence of the efficacy of teaching over leaving acquisition to run its natural course.

With regard to the first question, the one having to do with whether or not instruction can help learners learn grammar which they would not (easily at least) have learned on their own, research findings, although not unequivocal, seem to point to the value of form-focused instruction to improve learners' accuracy over what normally transpires when there is no focus on form (for a review, see Larsen-Freeman, forthcoming b). Again, to cite just one exemplary study, Lightbown and Spada (1990) showed that when form-focused instruction was provided, French-speaking students in English classes were more accurate and/or were at a more advanced stage with regard to the structures studied than students who were in classes which were primarily communicative in approach.

A question for my language teaching which follows from these research findings is *What can I give my students that they can't (easily) get on their own?* At least one answer to this question, which I believe is supported in the second language acquisition literature, is that I can help my students focus their attention where it will do the most good in unraveling the mysteries of the L2. My job as a language teacher is not to emulate the natural language acquisition process, which I call the minimalist position; my job is to help maximize or accelerate it.

2. Grammar is a collection of meaningless forms.

I think this myth has arisen because many people associate the term *grammar* with verb paradigms and rules about linguistic form. What is actually the case, however, is that grammar is not unidimensional and not meaningless, but rather embodies the three dimensions of morphosyntax (*form*), semantics (*meaning*), and pragmatics (*use*). As can be seen in the pie chart that follows, the three dimensions are interdependent as depicted by the arrows. A change in one dimension results in change in another. However, despite their interdependence, they also each offer a unique perspective on grammar.



For example, consider the passive voice. The passive voice clearly has a *form*. It is composed minimally of a form of the *be* verb and the past participle. Sometimes it has the preposition *by* before the agent in the predicate:

(1) The bank was robbed by the same gang which hijacked the armored car.

The fact that it can also occur only when the main verb is transitive is also part of its *formal* description.

The passive has a grammatical *meaning*. It is a focus construction, which confers a different status on the receiver or recipient of an action than it would receive in the active voice. For example, *the bank* in sentence (1) is differently focused than it would be in the active sentence (2):

(2) The same gang robbed the bank.

When or why do we *use* the passive? There are a variety of reasons: when we do not know who the agent is, when we wish to deliberately conceal the identity of the agent, when the agent is obvious and easily derivable from the context, when the agent is redundant, etc.

In order for ESL students to be able to use the English passive voice accurately, meaningfully and appropriately, they must master all three dimensions. This is true of any grammatical structure and is the reason why I call #2 a myth.

3. Grammar consists of arbitrary rules.

While admittedly, there is some synchronic arbitrariness to grammar, not all of what is deemed arbitrary is so. If one adopts a broad enough perspective, one can often see the reason why things are the way they are. Consider the following sentences:

(3) *There is the book missing.[1]
(4) There is a book missing.

Grammar books will say that the reason sentence (3) is ungrammatical is that sentences with existential *there* almost always take an indefinite noun phrase in the predicate. But why is this? Why is *there* followed by an indefinite noun phrase? The reason is not arbitrary. The answer is that *there* is used to introduce new information, and the preferred position for new information is towards the end of a sentence. A noun phrase which contains new information (i.e., new to the discourse/context) is marked by the use of the indefinite article, *a* or *an*, if it is a singular common noun, as in sentence (4) above. Thus, if we look carefully enough, we can often discern the reason for a rule and obviate its apparent arbitrariness. I tell my own students, who are teacher trainees in an MAT program, that they should think of giving their ESL students "reasons, not rules."

4. Grammar is boring.

I think that this myth derives from the impression that the only way to teach grammar is by using repetition and other rote drills. Teaching grammar for me does not mean asking students to repeat models in a mindless way. It does not mean memorizing rules. Such activities can be boring, and they do not necessarily teach grammar. I am not saying that there is no place for drills, but I believe drills should be meaningful (purposeful) in keeping with the nature of language. Compare *a* with *b* below:

a. The teacher asks her students to make yes/no questions out of the following prompts:

T: I got up at 7 this morning.	Ss: Did you get up at 7 this morning?
T: I took a shower.	Ss: Did you take a shower?
T: I got dressed.	Ss: Did you get dressed?
T: I put on my jewelry.	Ss: Did you put on your jewelry? Etc.

b. The teacher asks the students to close their eyes. Next, she changes five things about herself. For example, she takes off one shoe, she takes off her watch, she puts on her eyeglasses, she puts on a sweater and she turns her ring around Next, she asks students to use questions to figure out what changes she has made:

Ss: Did you take off a shoe?	T: Yes, I did.
Ss: Did you put on a sweater?	T: Yes, I did.
Ss: Did you take off your earring?	T: No, I didn't.
Ss: Did you fix your hair?	T: No, I didn't. Etc.

I think it is obvious that *b* can be more fun than *a*. More importantly, *b* engages the students in a less mechanical way than *a*. Such engagement is, I think, the key to successful learning. Students really have some purpose for posing questions. Students may still be working on the form of the grammar structure implicitly, but they are doing so without responding in an unthinking, mechanical manner. Teaching grammar in a way that engages students may require some creativity, but the teaching need not and should not be boring.

5. Students have different learning styles. Not all students can learn grammar.

Research has shown that some people have a more analytical learning style than others. According to Hatch (1974), some learners approach the language learning task as *rule formers*. Such learners are accurate, but halting users of the target language. Others are what Hatch calls *data gatherers*; they are fluent, but inaccurate producers of the target language. This observation by itself, however, does not address the issue of whether or not all students can learn grammar. While it may be true that learners address the language learning challenge differently, there has been no research that I know of to show that some students are completely incapable of learning grammar. Students have different strengths and weaknesses, which is what contribute to their uniqueness. Certainly, though, we know **all students can** learn grammar as is evident from their mastery of their L1. As grammar is no different than anything else, it is likely that students will learn at different rates.

6. Grammar structures are learned one at a time.

This myth is demonstrably untrue. Teachers may teach one grammar structure at a time and students may focus on one at a time, but students do not master one at time before going on to learn another. There is a constant interaction between new interlanguage forms and old. Students may give the appearance of having learned the present tense, for example, but then when the present progressive is introduced, often their previous mastery vanishes and their performance declines. This backsliding continues until the grammar they have internalized is restructured to reflect the distinct uses of the two tenses. We know that the learning curve for grammatical structures is not a smoothly ascending linear one, but rather is characterized by peaks and valleys, backslidings and restructurings.

7. Grammar has to do only with sentence-level and subsentence-level phenomena.

Grammar does operate at the sentence level and governs the syntax or word orders which are permissible in the language. Grammar also works at the subsentence level to govern such things as number and person agreement between the subject and verb within a sentence. But the scope of grammar stretches beyond these two levels. Grammar rules also apply at the suprasentential or discourse level in language. To provide an example, not every choice between the use of the past tense and the present perfect tense can be explained at the sentence level. Often the speaker's choice to use one or the other can only be understood by examining the discourse context. Similarly, the use of the definite article with a particular noun phrase after the noun phrase has been introduced in a text is a discourse-governed phenomenon. It would be a mistake to teach students grammar only at the sentence and subsentence levels. Much of the apparent arbitrariness of grammar disappears when grammar is viewed from a discourse-level perspective, just as satellite views of weather systems make the weather patterns clearer than a photograph taken from a closer-to-earth perspective.

8. Grammar and vocabulary are areas of knowledge. Reading, writing, speaking and listening are the four skills.

While grammar can be thought of as static knowledge, I prefer to think of grammar as a process. In fact, I have coined the word *grammaring* to give a form to the notion of grammar as a process. We would not be content if our students could recite all the known grammar rules of English and yet not be able to apply them. What we truly want is for our students to be able to use grammar in an unselfconscious fashion to achieve their communicative ends. As with any skill, achieving this goal takes practice.

Just what sort of practice is warranted, however, is a contentious issue at present. Ellis (1993) postulates that structural syllabi serve better to facilitate intake than they do to teach learners to produce grammatical items correctly. He states that grammar teaching should be directed at consciousness-raising rather than having learners practice accurate production. Lending support to Ellis' assertion that consciousness-raising should be the objective of grammar instruction is VanPatten and Cardierno's finding (1993) that students' experience with processing input data is more effective than that of giving students a grammatical explanation followed by output practice. Thus, just what constitutes "practice" is still an open issue.

9. Grammars provide the rules/explanations for all the structures in a language.

Many people believe linguists have arrived at an explanation for the structural behavior of a given language. This is not a true portrait of linguistics at all. Linguists certainly do not know all there is to know about English grammar. Explaining why things are the way they are it is thus an ongoing quest. Moreover, since languages evolve, linguists' descriptions can never be complete for all time, as they have to accommodate the changing nature of language. To offer one example, most grammar books make clear the fact that progressive aspect is not used with stative verbs; therefore, the following would be ungrammatical in English:

(5) *I am wanting a new car.

However, for some speakers of English this sentence is not ungrammatical, and even those who find it so would be more inclined to accept progressive aspect when it co-occurs with perfective aspect, as in (6):

(6) ?I have been wanting a new car (for some time now).

The point is that languages change, and we should view any textbook rule as subject to change and non-categorical. Just as grammar learning is a process, witness the persistent instability of interlanguages, so is grammar itself. There is little static about either.

10. "I don't know enough to teach grammar."

I have often heard teachers say this when they opt to teach one of the other language skills, or when they choose to teach a low-proficiency-level class. While it is true that teachers can only teach what they know, teachers who articulate the above often know more than they think they do. The pie chart introduced earlier can be a useful tool for teachers to collect what they do know about the form, meaning, and use of a particular grammar structure. What they don't know will become apparent from the gaps on the chart and the gaps will nominate themselves as items for the teacher's research agenda for further study. After all, there are there are few better ways to learn something than to teach it!

CONCLUSION

There will doubtless be those who would dispute the myth designation I have applied to some of these claims. Nevertheless, I believe that they are myths and as such have obfuscated our understanding of grammar and its pedagogy. If our goals include having our students be able to use grammar structures accurately, meaningfully, and appropriately, then I do believe a compelling case can be made for teaching grammar. Instead of grammar being conceived of as a static system of arbitrary rules, however, it should be thought of as a rational, dynamic system, which is comprised of structures characterized by the three dimensions of form, meaning, and use. Because we are interested in the application of this process, it is better to think of grammar as a skill to be practiced (grammaring), however implicitly and however practice is ultimately defined. Finally, as language teachers, we must reject the minimalist position. Our job as language teachers is not to emulate the process of language acquisition. Our job is to understand it, improve upon it, and accelerate it through the skillful application of reflective teaching practice, and pursuit of a complementary research agenda.

ACKNOWLEDGMENTS

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THE AUTHOR

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NOTES

[1] This is ungrammatical with an existential *there*. It might be seen as grammatical if the adverb *there* accompanied by someone pointing had been used.

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CROSS-CULTURAL WRITING AND RHETORICAL STYLES:

TOWARD A "SOCIALLY REALISTIC" CONTRASTRIVE RHETORIC

Yamuna Kachru

Research in contrastive (CR) owes its beginning and maturing to the cross-linguistic and cross-cultural writing by international learners of English (Purves, 1988:9). Now that a significant body of research has accumulated in contrastive studies of rhetorical styles, it is time to evaluate the theoretical and methodological underpinnings of the field. Accordingly, one major aim of this paper is to evaluate the CR Hypothesis (CRH) utilizing the linguistic paradigms of "socially realistic linguistics." In this paper, the assumptions of CRH are questioned on the basis of evidence from writing in various languages, socio-cultural norms of writing in Inner Circle English, and writing in English in the multilingual and multicultural context of the Outer Circle (B. Kachru, 1985). Subsequently, a methodology of CR research is proposed based on Halliday's notion of "meaning potential" (Halliday, 1978) and it is suggested that interpreting linguistic processes from this standpoint "involves the difficult task of focusing attention simultaneously on the actual and the potential, interpreting the discourse and the linguistic system that lies behind it in terms of the infinitely complex network of meaning potential... we call culture" (1978:4-5). Finally, the pedagogical implications of this approach, which exploits the socio-cultural meaning expressed by different rhetorical styles, are discussed.

INTRODUCTION

Contrastive rhetoric [CR, henceforth] developed as a field of enquiry out of pedagogical concerns related to ESL writing, and the study that started the cross-language comparison of rhetorical styles concluded that "contrastive rhetoric must be taught in the same sense that contrastive grammar is presently taught" (Kaplan, 1966 [1980], p. 409). By now, the concern is no longer purely pedagogical, though language teaching/learning still is a strong motivation for such studies. Moreover, the findings and the resultant claims of the 1966 study have been questioned in many respects. Whatever the controversy surrounding the CR hypothesis may be, it is undeniable that it has had an enormous impact on research on writing across cultures, and on the teaching of English to speakers of other languages (Leki, 1991). This is obvious if one looks at studies comparing writing in several languages with writing in English, e.g., Choi (Korean; 1988), Clyne (German; 1983, 1987), Connor (1987), Eggington (Korean; 1987), Hinds (Japanese; 1981, 1982, 1983, 1987), Johnstone-Koch (Arabic; 1983), Y. Kachru (Hindi; 1983, 1988), Kaplan (1988), Katchen (Persian; 1982), Kobayashi (Japanese; 1984), Ostler (Arabic; 1987), Pandharipande (Marathi; 1983), and Tsao (Chinese; 1983), among others. Furthermore, any claims and increasingly being presented as universally valid. It is, therefore, quite appropriate at this state to reflect upon the relationship of CR to writing across languages and cultures and determine if this research area sufficiently represents the 'socially realistic' theoretical and methodological concerns of cross-cultural linguistic research. It is, however, not possible to divorce the discussion here from the original pedagogical concerns of ESL completely. So this paper will make references to them, as well.

CLAIMS, ASSUMPTIONS AND IMPLICATIONS OF CR

In order to come to any conclusion about the nature of the relationship between CR and cross-cultural writing, it is necessary to understand clearly what the claims, assumptions, and implications of CR are. The major claim of the CR hypothesis is that writers from other cultures, especially non-native users of English, employ "a rhetoric and a sequence of thought which violate the expectations of the native [English-speaking] reader" (Kaplan, 1972). Hence, their writing is perceived as "out of focus," "lacking organization," or "lacking cohesion" (Kaplan, 1966). This claim is based on the assumption that there *is* a native English norm of writing which is clearly identifiable. The claim and the assumption naturally lead to the conclusion that it is both necessary and desirable to teach this model of writing to non-native users of English, since there are clear benefits to be derived from changing the "rhetoric and sequence of thought" of these users (Kaplan, 1987).[1] While the conclusion is applicable only to the pedagogical concerns of the CR hypothesis, it indirectly results in devaluing rhetorical patterns which do not conform to the native English-speaking reader's expectations. Often it leads to rather contradictory practices in pedagogical contexts. For instance, although the differences between American and British English are well-known and the differing spelling and grammatical conventions practiced by the British do not affect their credibility, the same conventions, we are told, if practiced by international students, say, from Malaysia, would affect their credibility in an American academic setting (Mackay, 1993, p. 3). The solution suggested in the following in the context of the Pacific rim students: They "will need to master the morphosyntactic rules of English that are utilized by their target audience" (Mackay 1993, p. 3). That is to say, international students need to master the variation in English between American and British English, and, in view of the Australian push in Asia, Australian English as well. This puts the whole international student population from Asia and Africa at risk.

This paper questions the claim, the assumption, and the conclusion of the CR hypothesis on the basis of the following: (a) the tentative nature of the findings of the CR studies and their methodologies; (b) studies comparing American, Australian, and British norms of writing; (c) existing research on the acquisition of language and literacy; and (d) research on writing in English in the Outer Circle (B. Kachru, 1985).[2] The theoretical framework adopted for this discussion is that of the "socially realistic linguistics" of Halliday (1978), Hymes (1974), B. Kachru (1981), and Labov (1988), among others. Following the theoretical discussion, the paper proposes a framework for CR research which is based on the notion of sociocultural meaning of rhetorical styles. This discussion takes the CR hypothesis out of the realm of ESL and looks at the wider world of cross-linguistic and cross-cultural writing in general. Finally, an orientation to research and pedagogy is suggested which exploits the "meaning potential" (Halliday, 1973) of different rhetorical styles to enrich the writing experience of all learners, native and non-native.

FINDINGS OF CONTRASTIVE RHETORICAL STUDIES

Research in CR has had many different strands; it is not possible to discuss all of them here in any detail. The studies that have investigated the interplay of culture and rhetorical mode have resulted in certain findings which may or may not be corroborated by further research. At present, it seems to be uncontroversial that native varieties of English such as American, Australian, British, and New Zealand differ significantly from each other in their rhetorical styles (e.g., Connor and Lauer, 1985; the study discusses persuasive compositions produced by American, British, and New Zealand writers). Also, languages such as Arabic (Ostler, 1987; Johnstone-Koch, 1983), Chinese (Huang, 1991; Tsao, 1983), German (Clyne, 1983, 1987), Hindi (Y. Kachru, 1983, 1987, 1988), Japanese (Hinds, 1980, 1981, 1982, 1983, 1987; Kobayashi, 1984), Korean (Choi, 1988; Eggington, 1987), Marathi (Pandharipande, 1983), and Persian (Katchen, 1982) have their characteristic rhetorical organizations of expository and argumentative prose not shared by the native varieties of English. Note, however, that most of these studies have employed methodologies based essentially on a Western rhetorical tradition. It is not clear that the resultant differences, at least in some of these studies, are not an artifact of the methodologies followed in them (Kenkel, 1991).[3]

NATIVE NORMS OF WRITING

If we examine research in other areas relevant to writing in general, there seem to be conflicting pieces of evidence that lead one to question the initial assumption as well as the conclusions of the CR hypothesis. First, the assumption that there are clearly identifiable norms of writing in the native varieties of English have found clear differences among them (e.g., Connor and Lauer, 1985).[4] Also, as Leki (1991) notes, most studies in CR have relied on style manuals or textbooks in rhetoric for characterizing English patterns rather than an examination of actual English writing. What this means is that writing in other languages, or ESL student writing, is compared with some idealized notion of writing in English. Further, it is not even clear that there is a well-defined text type such as "expository prose" in English (Grave, 1987), or, for that matter, in any language.[5] The same may be true of other text types, such as argumentative, persuasive, etc., which form the basis of CR research.

LANGUAGE ACQUISITION AND LITERACY

The evidence relevant to CR from studies in language acquisition and language use in the field of sociolinguistics/ethnographic linguistics raises a number of issues. I would like to situate the discussion of this point in the theoretical framework of systemic linguistics as developed by Halliday. In this framework, the central notion is 'meaning potential' defined in terms of culture: what people can mean and can do. Biologically, all humans are alike in their capacity for language acquisition. However, we learn our first language(s) "in the context of behavioural settings where the norms of the culture are acted out and enunciated" (Halliday, 1978, p. 23). Languages is thus the primary means of cultural transmission whereby social groups are integrated and the individual finds a personal and, subsequently, a social identity (Halliday, 1973). The context of culture defines the potential, or the range of possibilities, and the context of situation determines the actual, or the choice that takes place (Halliday, 1973). This is true of linguistic structure as well as rhetorical patterns. Language is not a set of isolated sentences; it is an interrelated set of texts in which meaning potential is actualized: people express meanings to realize some social goals. Evaluation of texts rests on an interpretation of the context of situation and the context of culture (Halliday, 1985).

This view of language is corroborated by research in first language acquisition (e.g., Halliday, 1975; Hasan, 1988; Hasan and Cloran, 1990), acquisition of literacy in the mother tongue (e.g., Heath, 1983; Scribner and Cole, 1981), and research on writing in the Outer Circle of the English-using world (B. Kachru, 1985). Since the research on the acquisition of literacy and writing in the Outer Circle are the most relevant for our purposes, I will discuss the research in both of these areas in some detail.

Work on the acquisition of literacy in different communities has shown that even within a well-defined cultural group (e.g., American culture), communities may differ with regard to the functions of literacy, the domains of literacy, the roles of literacy in the communities' life, and the value attached to literacy (Heath, 1983). It is not surprising, then, that communities that belong to different cultural groups will show greater variation in their views on and practice of literacy (Besnier, 1986; Scribner and Cole, 1981). Note that it is not enough to have access to a writing system, or printing, or other devices to produce and reproduce written texts. Ancient India had a well-developed writing system prior to the Buddhist period (500 BC), as is evident from inscriptions and tablets found in various locations within and outside India. There was also a well-developed tradition not only of creative literature, both prose and poetry, but also of arithmetic, algebra, astronomy, grammar, logic and philosophy. However, there is no evidence that written texts played an important role in the transmission of this body of knowledge. Instead, most of the accumulated knowledge was passed on orally, by a dedicated teacher to committed students. Thus, the claim that Western rhetoric is a result of the development of writing, and subsequently, of printing, and the rapid diffusion of literacy following the industrial revolution, needs to be further examined. The same is true of the claim that literacy contributes to 'logical' thinking. Studies such as Scribner and Cole (1981, pp.36-37) have arrived at the conclusion that

> Nothing in our data would support the statement...that reading and writing entail fundamental "cognitive restructurings" that control intellectual performance in all domains.

While one consideration may be a large literate population, a variety of cultural considerations play a role in the development of rhetorical patterns. Also, there does not seem to be a necessary cause-effect relationship between a straight linear thought or rhetorical pattern and the development of scientific and technological ideas. This becomes clear if one considers the evidence of the history of non-Western thought, e.g. that of China and India.[6]

WRITING IN ENGLISH IN THE OUTER CIRCLE

That cultural considerations play a role in the development of linguistic structures and rhetorical patterns is corroborated from the history of writing in English in the Outer Circle, too. It has been shown in several studies that the institutionalized varieties of English used in the countries of the Outer Circle have developed their own grammatical and textual forms to express their context of culture (e.g., Chishimba, 1983; Dissanayake, 1989, 1990; B. Kachru, 1982, 1987, 1992; Lowenberg, 1984; Magura, 1984; Nelson, 1991; Thumboo, 1985, 1990; Valentine, 1988, 1991). For instance, in Indian English, the categorization of verbs in terms of stative versus dynamic is not significant; instead, verbs are categorized in terms of volitionality, as in Indian languages such as Hindi, Marathi, Kashmiri, etc.[7] Also, it has been suggested that Indian English texts have stylistic features that recreate Sanscritic noetics (Y. Kachru, 1992). As has been emphasized in studies on world varieties of English (e.g., Dissanayake, 1989, 1990; B. Kachru, 1987, 1992; Strevens, 1980; Thumboo, 1985, 1990, among others), users of these varieties are bilinguals or multilinguals; English is one code in their code repertoire. The lexicogrammar and discoursal patterns they use represent their ways of saying and meaning, to use Halliday's terms. Note that, as Strevens (1980, pp. 68-69) says:

> The pragmatics of discourse seem to be prone to display features transferred from the local culture in the same way as pronunciation does. This is perhaps not surprising: the pragmatics of discourse constitute a major part of our rules for regulating both interpersonal relations in general and at the same time the subtle ways in which we express our own requirements and understand what other human beings are doing. Such rules are learned within our particular culture from a very early age—certainly before mastery of language—and over a long period, perhaps one's entire lifetime. The point at issue is that local forms of English vary in the detail of their discoursal rules; the appropriate set of detailed rules is an essential defining feature.

A FRAMEWORK FOR RESEARCH

In view of the above discussion, research in CR has to be much more sensitive to criteria establishing comparability of data from the languages under focus. As has been pointed out by Vahapassi (1988), it is neither easy to establish the congruency of writing tasks, nor is it easy to determine the comparability of the genres of writing (argumentative, persuasive, narrative, etc.). What needs to be done is to study the traditions of writing in different cultures and to establish clear criteria for comparability across genres and registers (Halliday and Hasan, 1976).[8] Both of these bases for research are important because (a) there may be genres which are unique to a language and culture, and (b) there may be different rhetorical patterns associated with different genres.

A few examples of what I mean by unique genres may be useful. For instance, the Anglo-American genre of written invitations (for parties, weddings, etc.,) has no parallel in the traditional Indian context. It has been borrowed in India from the English patterns of invitation and 'nativized' in Indian languages such as Hindi. On the other hand, in Hindi there is a text type that is labeled "deliberative" [**vičārātmak** in Hindi], which is not necessarily equivalent to the Anglo-American "argumentative" essay. In an argumentative text the goal is to prove that the view put forward in the text is right and that all competing opinions are wrong. In the deliberative text, however, the points in favor of, as well as those opposed to, a particular position are put forward so that readers are informed on all facets of an issue, and the decision as to which one of the positions presented is right or wrong is left to the reader.

An example of specific rhetorical patterns associated with particular genres is the circular or spiral rhetorical pattern of expository prose (Y. Kachru, 1983) as compared to the more preferred straight linear pattern (Kaplan, 1966) of scientific-technical writing in Hindi (Y. Kachru, 1988).[9] The non-linear pattern of writing may have conformed to some cultural expectations. Hinds (1987) suggests that the non-linear pattern of Japanese expository prose is in harmony with the expectation that the listener/reader has the primary responsibility for effective communication, which contrasts with the expectation in English that the primary responsibility for effective communication lies with the speaker/writer. Hinds then goes on to suggest a typology of listener/reader- versus speaker/writer-responsibility languages. This may turn out to be true of other languages as well.

In addition to the criteria of comparability, the framework of CR needs to be based on a theoretical model that takes into account the social meaning and the intertextuality of texts, wince texts derive their meaning not only from the social context, but also from other texts in the tradition. It has been observed that writers from several parts of the world, including China and India, give too much background information without relating it directly to the topic under discussion. The question that needs to be answered is why a writer would give more information than is absolutely necessary. The social meaning behind what appears to be a redundant amount of background information is related to the notion of politeness in these cultures. Directness is not as polite as indirectness; giving a great deal of background information allows the readers to draw their own conclusions with regard to the topic being discussed.

PEDAGOGICAL IMPLICATIONS

Now, let me spell out the pedagogical implications of the framework I have suggested here. Most studies that deal with pedagogical implications of CR studies suggest that it is desirable to teach ESL students the preferred rhetorical mode(s) of Inner Circle English (e.g., papers by Connor, Eggington, Hinds, and Kaplan, in Connor and Kaplan, 1987).[10] Although it is recognized that several languages have more than one "rhetorical mode" (e.g., English, Hindi, Japanese, Korean), the concern remains that "...while all forms are possible, all forms do not occur with equal frequency or in parallel distribution" (Kaplan, 1987, p. 10). Native speakers are aware not only of the forms, but also of the sociolinguistic constraints associated with the forms, and the consequences of selecting a particular form. Non-native users of a language do not necessarily possess the same competence (Kaplan, 1987). A major concern arising from these differences in competence is that unless the non-native users of English become competent in the English rhetorical patterns, the vast body of scientific and technical information stored in English will remain inaccessible to them. A less well-articulated reason, especially in writing, for teaching the rhetorical mode(s) of Inner Circle English is that it is the non-native users of English who are so keen to learn English. They might as well be prepared to accommodate to the demands of the native speaker norms. This is a political argument, not an academic one, and I will not treat it seriously here.

Going back to the first set of concerns, those of inaccessibility of scientific-technical knowledge unless one becomes proficient in rhetorical mode(s) of Inner Circle English, the pedagogical implications of the view of CR presented here do not support this conclusion. First, while it is perfectly legitimate to raise the consciousness of ESL writers regarding preferred English rhetorical patterns, it is equally legitimate and desirable to raise the consciousness of ESL professionals regarding the different rhetorical conventions of learners of English. Just as no language is more or less logical than any other, so no rhetorical pattern is more or less logical. For example, the following are examples of two different traditions of syllogistic thinking (quoted from Basham, 1954, pp. 501-2):

A. a. Where there is smoke there is fire.
   b. There is smoke above the mountain.
   c. There is fire on the mountain.

B. a. There is fire on the mountain.
   b. (Because) there is smoke above.
   c. (And) where there is smoke there is fire, as, for instance, in a kitchen.
   d. Such is the case with the mountain.
   e. (And) therefore there is fire on the mountain.[11]

The first represents the traditional Western syllogism, the second, the Indian. Both are equally logical and contain the same essential elements; the second contains an extra element, an example. Once the equivalences are made apparent, it is clear that neither one is superior to the other. In fact, the Indian syllogistic thinking is more explicit in some sense in that, according to Datta (1967, pp. 126-7):

> ...we do not have a mere formal syllogism, but also an attempt to establish its material validity by the citation of concrete instances supporting the universal major premise.

In view of the above, I suggest that it is neither necessary nor desirable to promote the so-called direct, linear pattern. This suggestion is motivated by two major considerations. First, the findings of the research on socialization through language mentioned above do not point to the practicality of training the entire English-using population of the world to the way of thinking and writing in American, British, or any other variety of English. As Halliday observes, even the *mode*, the rhetorical channel with its associated strategies, though more immediately reflected in linguistic patterns, has its origin in the social structure; it is the social structure that generates the semiotic tensions and the rhetorical styles and genres that express them (1978, p. 113). Obviously, not all the English-using world can become a clone of Anglo-American society. Nevertheless, it would be a pity to deny large numbers of people of the Western and non-Western world the opportunity to participate in contributing to the development of knowledge in all fields, including science and technology. A narrow view of what constitutes good writing may shut out a large number of original studies from publication and dissemination, since most of the information technology is under the control of the Inner Circle English-speaking world. Any view of rhetoric that shuts out a majority of people from contributing to the world's knowledge base, and legitimizes such exclusion on the basis of writing conventions, hurts not only those who are excluded, but also those who would benefit from such contributions. It is worth remembering that the bases for modern scientific and technological revolutions were laid in the mathematical and scientific thinking of many non-Western cultures, e.g., the Indian (and Arab) mathematical traditions of investigation.

Secondly, it is clear that within the Inner Circle English conventions of writing, there is a difference between the two major traditions—the American and British. For instance, while Hoey (1983) discusses examples of discourse which contain paragraphs with more than a single unit (e.g., see the text in 4.10 and its analysis in 4.11 on p. 68), Smith and Liedlich (1980) insist that "[t]he paragraph is a unit of thought concerned with the exposition of a single idea, and if it is to communicate that idea clearly and concisely, it must possess oneness. That is, all the details—the reasons, illustrations, facts—used to develop it must pertain to one controlling idea" (p. 21). Also, the teaching of rhetoric—an American institution not shared by all native English-speaking countries—seems to have an idealized notion of what an English paragraph or composition is, while most real texts, even within the American culture, exhibit variation from the idealized pattern(s). The parallelism of Arabic and the circularity of Indian writing occur in native English writing as well.[12] If academic writing in general is not to become a sterile, formula-oriented activity, we have to encourage individual creativity in writing. It is the tension between received conventions and the innovative spirit of the individual that produces good writing in academic disciplines as well as in creative literature.

This, however, does not mean that I am advocating neglecting the readers and their expectations. As Barthes (1977, p. 148) observes, "The reader is the space on which all the quotations that make up a writing are inscribed without any of them being lost; a text's unity lies not in its origin but its destination..." What I am suggesting is that instead of putting all the responsibility on the writers from the wider English-using world, it is desirable for the readers from the Inner Circle English world to share the responsibility of making meaning. It is thus necessary to train the readers who, for whatever reason, come across texts produced by international users of English. This will enrich the available and acceptable range of linguistic structures and rhetorical modes, and serve the cultural diversity of which we are becoming increasingly aware. Cross-cultural communication does not mean that one party carries all the burden. After all, it is already happening in creative literature; almost all the major literary prizes in recent years have been awarded to multilingual, multicultural authors writing in English, e.g. the Booker Prize of Britain went to the Maori writer, Keri Hulme, in 1985, the Neustadt Prize of the U.S.A., to the Indian writer, Raja Jao, in 1988, and, of course, the Nobel Prize to Nigerian writer, Wole Soyinka, in 1987. This has happened because, though the novel is a Western form, critics seem to agree that "its most spectacular reinventions over the past several decades have come from the non-Western world" (Jussawalla and Dasenbrock, 1992, p. 3). At the risk of my proposal being characterized as an "emotional" (Selinker, 1992) response to received wisdom from the CR hypothesis, let me suggest that it is time for the multilingual, multicultural world to be welcomed to contribute to writing in general, not just to creative literature.

CONCLUSION

To conclude, the CR hypothesis, as presently conceived, is neither compatible with the aims of cross-linguistic and cross-cultural research, nor with the demonstrated pluricentricity of English. Contrasting rhetorical patterns is as legitimate an activity as contrasting linguistic structures, and should aim at arriving at a typology and ultimately, a set of universals of rhetorical patterns. This goal can only be achieved if CR studies are based on a theoretical framework that takes into account the total social meaning of texts, and not based on merely a theory of text suggested in Martin (1992), though that is important, too. Contrasting rhetoric with the aim of changing the behavior of users of English who are not native speakers is a form of behaviorism which is no longer acceptable, either in linguistic research or in language pedagogy.

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NOTES

[1] These assumptions are clearly expressed in Kaplan (1966, 1987), though the latter does not make as strong a claim about the characteristics of ESL compositions. The concern seems to be that if non-native users need to exploit the scientific and technical knowledge stored through the medium of English, they would have to be trained in the "English-based sociology of knowledge" to do so.

[2] B. Kachru (1985) divides the English-using world into three concentric circles. The Inner Circle consists of the native English-speaking countries, e.g., Australia, Canada, New Zealand, the U.K., and the U.S.A. The Outer Circle comprises the former colonies or spheres of influence of the U.K. and the U.S.A., e.g., India, Kenya, Nigeria, the Philippines,

Singapore, among others. In these countries, nativized varieties of English have achieved the status of either an official language, or of a language widely used in education, administration, legal system, etc. The Expanding Circle consists of countries where English is fast becoming a dominant second language in the domains of education, science, and technology, e.g., China, Japan, Taiwan, Thailand, and the countries of Europe.

[3] Kenkel (1991) argues that the apparent differences between the Korean and English writing examined in Choi (1988) and Hindi and English writing examined in Y. Kachru (1988) is an artifact of the methodology adopted in these studies. The differences disappear if the framework of argumentation pragmatics derived from Ducrot (1980), Moeschler (1985), and Roulet (1985) is utilized instead.

[4] It is true that Connor and Lauer's study (1985) of persuasive writing in New Zealand, the U.K., and the U.S.A. is based on the writing of high school students. The authors point out the developmental writing problems in the data they analyzed. Nevertheless, the differences they found in the overall structure of the compositions are independent of the developmental problems.

[5] Grabe (1987, pp. 133-135) makes it clear that while there seems to be a clear basis for positing a text genre of expository prose, within the genre there are several text types, "including at least two types of Science texts, a type of Humanities text, and another type yet to be labelled."

[6] Such claims have been made in several studies on contrastive rhetoric (e.g. Kadar-Fulop, 1988; Kaplan, 1987). These studies also suggest that ESL students from non-Western cultures may not be familiar with a tradition of writing in what Kadar-Fulop labels as its documenting, transactional and epistemic functions. Anyone familiar with the history of thought in, e.g. China (Moore, 1967a), India (Moore, 1967b), Japan (Moore, 1967c), and the Middle East would know that such fears on the part of ESL professionals with regard to their non-Western students are ill-founded.

[7] That is why it is perfectly grammatical to use verbs such as *know, see, hear,* etc. as dynamic verbs in the South Asian, South-East Asian, and African varieties of English, as in "I am knowing them since 1972."

[8] I am using the term 'register' in the technical sense of Halliday and Hasan (1976). Registers are defined in terms of 'field', 'tenor', and 'mode'. Roughly, 'field' refers to what the participants in a discourse are engaged in, including what they are talking about. 'Tenor' refers to the mutual relationship of speaker-addressee(s), and other participants, if any. 'Mode' refers to the part language is playing in the social action taking place, including the channel of interaction (e.g., spoken versus written) and the effect being achieved in terms of persuasion, exposition, etc.

[9] Note that these patterns are not obligatorily associated with these genres; they represent the preferred mode in the two genres.

[10] This is not to suggest that all of them are in complete agreement. While Connor and Kaplan recommend teaching the English patterns to ESL students without any further qualification, Hinds suggests making the Japanese ESL student aware of the fact that effective written communication in English depends upon the writers assuming exclusive responsibility for getting across what they want to say, and Eggington suggests teaching both the English and the Korean patterns so that Korean users of English can have access to the knowledge being conveyed through English.

[11] The items in parentheses have been added to make the relationships clearer for ease of comparison.

[12] The paragraph quoted from F. David Peat's *Superstrings and the Search for the Theory of Everything* (Chicago & New York: Contemporary Books, 1988, pp. 240-241) is as follows (the repeated parts are in italics that have been added):

> Penrose was able to show that each of the massless fields of nature can be created out of nothing more than a function of a single twistor. This is a truly remarkable result. It means that it is possible to write down *a relatively simple mathematical function in twistor space that is so powerful it contains all the information that physicists need to know about the field at every point in space and for all time.* In place of the differential field equations of the nineteenth-century physics, Penrose has substituted *a simple function in twistor space. The power of twistor-mathematics is sufficient to define the field for all time and at all points in space.*

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MOTHER, I'D RATHER DO IT MYSELF, MAYBE:
AN ANALYSIS OF VOICE-ONSET TIME
PRODUCED BY EARLY FRENCH-ENGLISH BILINGUALS

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This study presents the results of a speech-production experiment designed to compare the English and French phonetic systems of seven French-English bilingual children with those of seven French monolingual and seven English monolingual children. The phonetic feature examined was voice-onset time. Computer-based analysis revealed that only some of the bilingual children produced stop consonants using two distinct temporal categories—one for French and another for English. Moreover, their production in English approximated, but did not match, that of the English monolinguals. This was in spite of the fact that the bilinguals had received very early dual-language input from native speakers of French and English.

An obvious explanation for these results is that the bilinguals, regardless of their early exposure to two languages, still experienced some unidirectional and/or bidirectional influence in their phonetic systems. Other possible reasons for the bilingual children's patterns of speech production are examined in light of hypotheses concerning bilingualism and second-language acquisition.

It is also suggested that the bilinguals may not have received monolingual-like input in English, since their native-English-speaking mothers had lived in France for a number of years.

INTRODUCTION

Background

Over 40 years ago, Weinreich (1953) provided an account of the ways in which a bilingual's two language systems could interact. As is now well known, Weinreich formalized a distinction between three types of bilingualism—type A (coordinate bilingualism, in which the two systems are separate), type B (compound bilingualism, in which the two systems are shared), and type C (subordinate bilingualism, in which one system is produced and/or perceived via the more dominant system). Although his taxonomy has undergone considerable change—and even general abandonment—in recent decades, the fundamental issue underlying his approach to bilingualism remains of interest.

That is, Weinreich's tripartite distinction was primarily an attempt to provide a cogent linguistic account for the ways in which a bilingual's two language systems could be organized in relation to one another. Indeed, linguists have examined this issue using a variety of theories and research paradigms rooted in psycholinguistics, neurolinguistics, and cognitive science (e.g., Flege, 1991; Paradis, 1985; Potter et al., 1984). The question today remains much the same as it was several decades ago: Is there a systematic relationship between the two languages of a bilingual and, if so, how can this relationship best be characterized? In other words, are a bilingual's two languages essentially separate (thereby suggesting two discrete mental representations) or shared (suggesting one over-arching mental representation), or is one language subordinate to the other (suggesting one mental representation mediated via another other)?[1]

Closely related to this question is the issue regarding the possible role of age at the onset of second-language (L2) acquisition and subsequent dual-language fluency. Specifically, the results of a number of experiments have suggested that 'earlier is better'—i.e., that earlier acquisition of a language yields a system that more closely approximates that of a native speaker than does later acquisition. Indeed, implicit in the claim by Lenneberg (1967), and more recently by Hurford (1991), that there is a critical period for language acquisition and that it ends around puberty is the notion that early acquisition of a language results in a more native-like system than does late acquisition. In fact, in the past several decades, experiments whose results have supported this position have been conducted on the lexico-semantic, the morpho-syntactic, and the phonetic systems.

For example, Mayberry and Eichen (1991) reported that, among the users of American Sign Language (ASL) whom they tested, early learners were more likely to perform accurately in an ASL sentence-recall task than were late learners for whom ASL was a first language. Moreover, native ASL users performed more accurately than a group of ASL users who had acquired ASL between ages 5 and 8. And, in examining the speech-intelligibility performance of Korean-English bilinguals presented with English computer-processed sentences, Bott (1993) observed a significantly larger number of erroneous responses even to relatively common words among bilinguals who had acquired English in adolescence than among those who had acquired English in early childhood. Similarly, Kim found that early Korean-English bilinguals were both faster and more accurate than late bilinguals in an English lexical-decision task (1996).

In terms of the syntactic system, Oyama's findings (1978) are also revealing. Specifically, she observed that, among native speakers of Italian who had immigrated at various ages to the U.S., those who had arrived prior to age 11 performed approximately as accurately as did native speakers of English, while those who arrived at later ages did not. Similarly, Johnson and Newport (1989) reported that, among their 43 Korean-English and Chinese-English bilingual subjects, those who had arrived in the U.S. between the ages of 3 and 7 performed nearly identically to native speakers of English in a grammaticality-judgment task, both in terms of their overall error rates and the standard deviation of each group's scores. By contrast, the later age-of-arrival groups performed significantly worse than either the native-speaking English group or the earliest-arrival group. A related finding was observed by Shim (1995) in her reaction-time study of five age-of-arrival groups of Korean-English bilinguals presented with an English grammaticality-judgment task. Shim concluded that, in terms of the availability of Universal Grammar to the second-language learner, there is an optimal sensitive period that ends around age 5, and a residual sensitive period that ends around ages 12 to 14. Other researchers who have examined subjects' performance with respect to the morpho-syntactic system have likewise concluded that the younger an individual is at the onset of language acquisition, the more native-like his/her performance will be (Patkowski, 1980; Bott, 1993; Mayberry & Eichen, 1991).

Yet the largest number of studies concerning the relationship between age of acquisition and subsequent linguistic performance have been carried out on the phonetic system. To date, many such studies have reported an earlier-is-better affect in terms of L2 acquisition (Asher & García, 1969; Fathman, 1975; Flege, 1991; Oyama, 1976; Seliger et al., 1975; Williams, 1979; but cf. Kim, 1995). It is most likely findings such as these that have led Baetens Beardsmore (1986) to state that "often the child or early bilingual has no problems" with interlingual transfer (p. 71).

Nonetheless, there is counter-evidence to such an assertion. For example, in a study of the reaction times and error rates of early French-English bilinguals in an English lexical-decision task and an English grammaticality-judgment task, Mack (1986) found that the bilinguals performed significantly slower in responding to English lexical items than did English monolinguals and that they exhibited a significantly larger number of errors in responding to sentences that were ungrammatical in English but that were direct or near translations from French (e.g., **It has almost stopped to rain ← Il s'est finalement arrêté de pleuvoir*). It appeared that such results were due either to the unintentional and perhaps temporary influence of the subjects' French in their processing of English lexical and semantic stimuli or to the presence of a stable internalized English system that had been restructured due to the subjects' early and prolonged exposure to French. Furthermore, although the same subjects, when required to produce English stop consonants and vowels, revealed patterns nearly identical to those of English monolinguals, they responded significantly differently in a vowel-perception task involving the identification of /i/ and /I/, with responses suggesting the influence of their French perceptual vowel space upon that of English (Mack, 1989).

Other evidence of the possible influence of one language upon another in an early bilingual emerged from a study of an English-dominant French-English bilingual child (Mack, 1990). Segmental aspects of this child's speech were subjected to computer-based analysis revealing that, although he maintained two distinct systems with respect to his voice-onset times in French and English, his voice-onset times in neither language were like those of age-matched monolingual French and English subjects. These data support results obtained by Caramazza et al. (1973) in their study of fluent French-English bilinguals, by Flege and Eefting (1987b) in their study of Spanish-English bilinguals, and by Moen (1995) in her study of Chinese-English bilinguals.

Justification for the Present Study

In view of the varied and sometimes contradictory findings obtained in previous work on early bilingualism, the present study was designed to examine the speech production of French-English bilingual children. The major objectives of this study were threefold: (1) to determine whether or not there are two discrete phonetic systems among children who have acquired two languages early and with naturalistic native-speaker input, (2) to determine whether or not the two phonetic systems—if they are distinct from one another—match those of monolingual users of each one of the systems, and (3) to examine possible causes for the patterns observed in the phonetic system(s) of fluent early bilinguals.

For this study, a major temporal feature—voice-onset time (VOT)—was selected. In English, VOT is an important cue to voicing distinctions in the homorganic stop consonants, as in /b/ vs. /p/, /d/ vs. /t/, and /g/ vs. /k/. It is defined as the duration between the release of the primary occlusion in the vocal tract and the onset of vocal-cord vibration (phonation). In their seminal cross-linguistic study, Lisker and Abramson (1964) concluded that languages generally fall into one of three modal categories in terms of their use of VOT. That is, stop-consonant release may occur prior to the onset of phonation, yielding a VOT of less than 0 msec (with its duration expressed as a negative number), the release may occur from about 0 to 30 msec after the onset of phonation (with its duration expressed as a positive number), or the release may occur from about 35 to 100 msec after the onset of phonation (with its duration also expressed as a positive number). The three resulting durational categories are often referred to as prevoiced, short-lag, and long-lag, respectively (Lieberman and Blumstein, 1988).[2]

In English, there are two clear VOT categories for stop consonants in stressed prepausal position. That is, the stop consonants /b,d,g/ have VOTs in the prevoiced to short-lag range while the stops /p,t,k/ have long-lag VOTs (Flege and Eefting, 1987b; Lisker and Abramson, 1964; Mack, 1989 [also reported in Mack, 1984]; Zlatin and Koenigsknect, 1976). In English in stressed prepausal position, /b,d,g/ are considered voiced consonants, while /p,t,k/ are considered voiceless. Likewise, there are two clear stop-consonant categories in French, although their distribution along the VOT continuum differs from that of the English VOT categories. That is, in French in stressed prepausal position, /b,d,g/ are nearly always produced with prevoicing while /p,t,k/ have short-lag VOTs (Caramazza & Yeni-Komshian, 1974; Caramazza et al., 1973; Delgutte, 1986; O'Shaughnessy, 1981). In fact, French /p,t,k/ have VOTs very close to those of the English /b,d,g/. The contrast between the VOT patterns of French and English is clearly visible in waveforms of the stop consonants (Figure 1). (It is important to note that there are other acoustic correlates of voicing besides VOT [e.g., Cooper et al., 1952; Repp, 1979], but these will not be examined in the present study.) In English at least, VOT appears to play a major role in the perception of a consonant as voiced or voiceless. Also of relevance is the fact that, in English, VOT categories stabilize quite early in a child's phonetic system (Kewley-Port & Preston, 1974; Macken & Barton, 1979)—even as early as 70 weeks of age (Mack & Lieberman, 1985).

Thus, an analysis of VOT as produced by French-English bilingual, French monolingual, and English monolingual children was viewed as appropriate and potentially revealing in determining whether or not early bilinguals do, in fact, maintain two distinct phonetic systems—one with VOT values appropriate for one of their languages, and one with VOT values appropriate for the other.

EXPERIMENT

Subjects

There were 21 subjects in three groups—seven French-English bilinguals, seven French monolinguals, and seven English monolinguals. In each group there were two female and five male subjects, and two sets of siblings. The overall mean age of the subjects was 8 years, 7 months, while the overall range in ages was from 7 years, 7 months to 10 years, 3 months. The mean ages of the subjects in the three groups were nearly identical (Table 1).

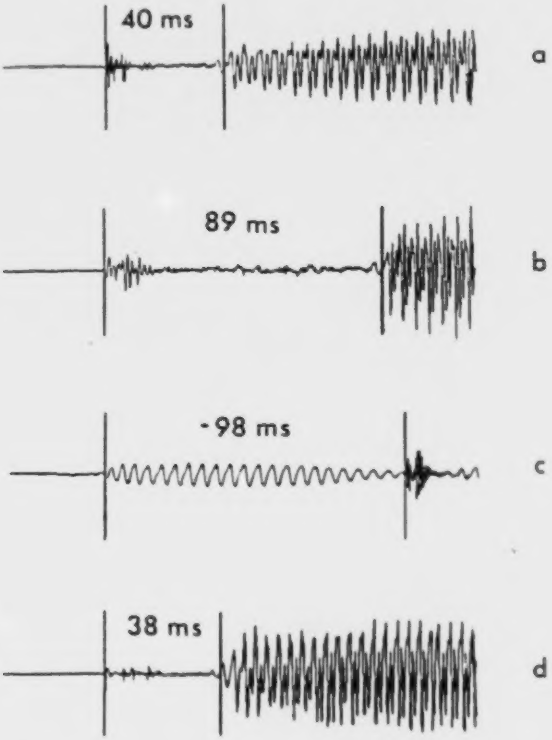

Figure 1. Onsets for word-initial English and French velar stop consonants produced in isolation. Waveforms were computer derived from speech produced by a native-English-speaking child and a native-French-speaking child. VOTs are demarcated between the two cursors. a = [g] in the English word *girl*, b = [k^h] in the English word *car*, c = prevoiced [g] in the French word *gant*, d = [k] in the French word *camion*. Note that the English [g] has a short-lag VOT of 40 msec while the French [g] is prevoiced. Also, the English [k^h] is quite long in contrast to the French [k] which has a VOT nearly identical to that of the English [g] (from Mack, 1990).

French Monolinguals			*English Monolinguals*			*French-English Bilinguals*		
CS	8;1	(f)	JN	8;0	(m)	JP	7;4	(m)
FS	10;3	(m)	LN	10;3	(f)	MP	9;4	(m)
FZ	9;11	(m)	MK	7;6	(f)	MR	10;3	(m)
LW	7;10	(m)	MM	9;11	(m)	NG	7;5	(m)
MD	8;4	(m)	NM	7;11	(m)	RG	9;1	(m)
OC	8;4	(f)	RR	8;1	(m)	RN	9;3	(f)
YD	8;4	(m)	TS	8;7	(m)	SF	7;0	(f)
$\bar{x}$	8;8		$\bar{x}$	8;7		$\bar{x}$	8;6	

Table 1. Age and sex of the 21 subjects in the three groups.

Siblings in the French monolingual group were CS and FS, and MD and YD (the latter were also fraternal twins); siblings in the English monolingual group were JN and LN, and MM and NM; siblings in the French-English bilingual group were JP and MP, and NG and RG. The inclusion of siblings was unintentional but fortuitous, for it permitted direct comparison of the speech production of pairs of subjects raised in presumably identical, or nearly identical, linguistic environments.

The seven French-English bilingual subjects were residents of Annecy, France, and all were recruited by an adult French-English bilingual, well-known to one of the authors (MM). All lived with mothers who were native speakers of American or British English. Six of the bilinguals had native-French-speaking fathers. (One father was a native speaker of English, but he did not reside with his wife and child.) All of the bilinguals attended the same local school in which instruction was in French.

Prior to the experiment, the five mothers of the bilinguals were asked to complete an 18-item questionnaire regarding their children's language background and fluency (Appendix 1). Results revealed that English was spoken 40 to 90% of the time at home, and French 10 to 60% of the time at home (Table 2). Six of the bilinguals had been exposed simultaneously to French and English from birth. One bilingual subject, RN, had been exposed to English from birth and to French from age 3 onward. The primary and/or sole source of the bilinguals' input in English was from their mothers and their mothers' native-English-speaking friends.

On the questionnaire, the mothers were asked to rate their children's overall language proficiency on an 11-point scale with 0 denoting no knowledge of the language in question and 10 denoting native-like proficiency. All mothers rated their children's French as 10. They rated their children's English from 4 to 10, with a mean of 7.3. Thus, the bilingual subjects appeared to be highly fluent in French and moderately to highly fluent in English. Most, if not all, were dominant in French.

Still, it must be emphasized that the bilinguals were not only early bilinguals, but simultaneous bilinguals (McLaughlin, 1984). That is, they were native speakers of two languages. According to McLaughlin, if a child is exposed to his/her second language by age

3, he/she may be termed a simulaneous bilingual. With this criterion, subject RN can thus be included as a native speaker of two languages, since her exposure to French began by age 3. In the phonetics literature, there are few studies in which the early bilinguals examined were actually native speakers of both of their languages. The fact that the French-English bilinguals in this study did acquire both languages in infancy or very early childhood with native-speaker input in both languages makes it even more likely that they would have two discrete VOT systems which could both, perhaps, be monolingual-like.

	French Rating	*English Rating*	*% French*	*% English*
JP	10	7	50	50
MP	10	7	50	50
MR	10	7	60	40
NG	10	4	50	50
RG	10	6	50	50
RN	10	10	10	90
SF	10	10	60	40

Table 2. Bilingual subjects' proficiency ratings in French and English and percent of the time French and English were spoken in the home.

The mothers of the bilingual subjects had lived in France from 9 to 14 years. They were likewise asked to rate their proficiency in French and English. They gave themselves a mean score of 8.4 in French with a range of 7 to 10, and all rated themselves as 10 in English.

The seven French monolingual subjects also resided in Annecy, France, and were recruited by the same individual who recruited the bilingual subjects. All of the French monolinguals attended school with the French-English bilinguals. Their mothers completed an eight-item language-background questionnaire in French (Appendix 2). Responses revealed that all French monolingual subjects had native-French-speaking parents, that only French was spoken in the home, and that none of the subjects knew English or any other language.

The seven English monolingual subjects lived in Urbana, Illinois, and were recruited by one of the present authors (SB) who knew the children's parents. Their mothers completed an eight-item language-background questionnaire in English (Appendix 3). Responses revealed that all had native-English-speaking parents and that only English was spoken in the home. Two of the subjects had received minimal French language instruction at school and one had taken an 8-session class in beginning Spanish.

Materials

For the VOT production task, materials consisted of 30 isolated words in English and 30 isolated words in French. Each of the six stop consonants, /b,d,g,p,t,k/, occurred in word-initial position in five different words and in a variety of prevocalic contexts. Of the 30 words in each language, eight were French-English cognates. These were included to increase, however slightly, the cross-linguistic comparability of the materials. It was also anticipated that, in a future analysis of the data, comparison of the VOTs in cognates versus non-cognates would be made. In addition, /t/ was elicited in two carrier phrases—*Tous les* . . . in French and *Two little* . . . in English—so that the VOTs of word-initial stops produced in isolation could be compared with those produced in context (Appendix 4a and 4b and Appendix 5a and 5b). This was deemed important because words produced in context may be more characteristic of naturalistic utterances than those produced in isolation and they may have shorter VOTs (Beardsley & Cullinan, 1987; Klatt, 1976). All words to be produced were represented pictorially in colored line drawings of easily named items on five- by seven-inch notecards.[3]

Procedure

Prior to beginning the production task in French, the bilingual subjects were asked to describe, in French, the colorful cover of a storybook; prior to beginning the production task in English, the bilingual subjects were asked to describe, in English, the same picture. One purpose of this was to put the subjects at ease with the recording process. Hence, the French monolingual and English monolingual subjects were also asked to describe the picture prior to the production task. A second purpose, relevant only for the bilingual subjects, was to help create a language-appropriate set prior to each production task. For, at least in terms of speech perception, it has been demonstrated that the inducement of a particular language set can influence performance (Elman et al., 1977, Flege & Eefting, 1987a). Further, when the French-English bilinguals and the French monolinguals were to begin the French-language task, a fluent (but non-native) speaker of French provided instructions. When the French-English bilinguals and the English monolinguals were to begin the English-language task, one of the authors (MM, a native speaker of English) provided instructions. For the bilinguals, the order of the languages to be used was counterbalanced. For all subjects, the cards depicting the items to be named were presented twice in two different randomization orders, and they were randomized anew for each subject.

All subjects were recorded on cassette tape with a Sony Professional Walkman and a high-quality directional microphone. The French-English bilinguals and French monolinguals were recorded by MM in a quiet room in a private home in Annecy. The English monolinguals were recorded by MM in a quiet room in a private home in Urbana.

The speech production task yielded 60 VOTs for words in isolation per monolingual subject and 120 VOTs (60 for French words and 60 for English words) per bilingual subject. It also yielded 10 /t/ VOTs for words in the carrier phrase per monolingual subject and 20 /t/ VOTs (10 for French words and 10 for English words) per bilingual subject. Thus the total number of words produced in isolation was 1,680, and the total number of words produced in the carrier phrase was 280, for a total of 1,960 words. Of these, fewer than 2% were unacceptable for acoustic analysis. A word was considered unacceptable if its signal was unclear due to misarticulation or transient background noise or because the duration of its VOT was 2.5 standard deviations above or below the subject's mean for the particular phoneme class to which it belonged.

Data Analysis

For data analysis, the analog output of the recorded speech was re-recorded onto reel-to-reel tape. It was then played on a TASCAM 32 stereo tape recorder whose output was directed to an IBM PC-AT for digitizing. The speech signal was sampled at 20 kHz and acoustic analysis was conducted directly on the waveform display of the signal using a waveform editing program (Cheng et al., 1988). Cursors were used to demarcate utterance segments to within 1/100 msec. The onsets of prevoiced stop consonants were generally clear, characterized by a low-amplitude quasi-periodic waveform of minimal complexity. The onsets of short-lag stop consonants were often characterized by a small, brief, aperiodic spike or burst followed by a segment that was brief, low in amplitude, and aperiodic. The onsets of the long-lag stop consonants were almost always preceded by a clearly defined burst and followed by a relatively long aperiodic segment of aspiration. The onset of phonation was readily detectable as the beginning of a series of pitch periods, characterized by marked periodicity and increased amplitude. The cursor demarcating the onset of phonation was always placed at the zero crossing of the first positive peak of pulsation. It should be noted that some subjects produced prevoiced tokens that also had a short-lag segment. In these cases, values for the prevoiced segments were computed in the means for prevoiced stops, and values for the short-lag segments were computed in the means for short-lag stops, as was done previously by Mack (1989).

If a question regarding demarcation arose, two of the authors (MM and CB) examined the waveform together to arrive at a decision regarding segmentation. Moreover, in an assessment of inter-rater reliability, 30 tokens from three different subjects were measured by one of the authors, and then independently by another. Both agreed that five of the tokens could not be analyzed due to transient background noise or the lack of a clear onset, and that five others were simply difficult to segment. Of the remaining 20 tokens, the inter-rater reliability coefficient was .9966. The mean VOT obtained by one of the authors for the 20 tokens was -7.07 msec, while the mean VOT obtained by the other was -7.02 msec, revealing an extremely high level of inter-rater agreement regarding demarcation of VOT.

For the purposes of statistical analysis, analyses of variance (ANOVAs) and t-tests were used since there was no reason to believe that the values of the variables violated the assumptions underlying the use of parametric statistics (Hatch and Lazaraton, 1991; Keppel, 1982). Moreover, the use of parametric statistics permitted the examination of potential interactions between and among independent variables—which examination would not have been possible had non-parametric statistics been applied. Furthermore, it was not believed that the relatively small sample sizes posed a problem for, as indicated by Kraemer and Thiemann (1987), various disciplines have their own criteria regarding acceptable sample size. They note that "[t]o some extent, the differences in the minimum acceptable sample size reflect the types of questions, designs, measures and analyses that are used in a particular field" (p. 28). Thus, a speech-production study may be based upon data gathered from relatively few subjects, since each subject often provides a large number of tokens requiring careful and detailed acoustic analysis, as was the case in the present study.

Results

French monolinguals and English monolinguals. In the tables presented below, a single grand mean is reported for the VOTs of /b,d,g/ and for the VOTs of /p,t,k/—i.e., separate mean values for each subject are not provided for each phoneme differing in place of articulation. However, statistical analysis was conducted using place of articulation as a separate factor in all 3-way ANOVAs reported.

Initial analysis of the data involved determining that the French and English monolinguals did, indeed, produce VOTs that differed systematically and that matched, at least reasonably well, results observed in previous studies of voice-onset time in French and English. Inspection of the data indicated that the two groups of monolinguals did utilize distinct VOT categories.

Specifically, the mean VOT value for prevoiced utterances with word-initial /b,d,g/ was -88.75 msec for the French monolinguals and -97.17 for the English bilinguals (Table 3). (Since relatively few utterances were prevoiced by the English monolinguals, only descriptive statistics were used for this comparison.) The French monolinguals prevoiced 168 (80.00%) of their tokens, while the English monolinguals prevoiced only 22 (10.47%). And while all of the French monolinguals prevoiced at least 20 tokens, none of the English monolinguals did so. (One monolingual prevoiced 16 tokens, three prevoiced two tokens, and three prevoiced none.) These data thus reveal that, for the French monolinguals, but not for the English monolinguals, prevoicing was a consistent feature of their production of the stops /b,d,g/ as has been asserted in previous studies of VOT in French.

	French Monolinguals			*English Monolinguals*	
	Prevoiced	Short-lag		Prevoiced	Short-lag
CS	-86.69	11.84	JN	---- *	19.89
FS	-69.25	18.76	LN	-109.23	11.38
FZ	-77.55	17.61	MK	----	24.68
LW	-92.93	11.38	MM	-81.70	19.96
MD	-85.11	11.06	NM	----	22.70
OC	-94.37	11.47	RR	-104.57	24.58
YD	-115.32	8.16	TS	-93.18	23.17
$\bar{x}$	-88.75	12.90	$\bar{x}$	-97.17	20.91
s	(14.60)	(3.83)		(12.32)	(4.63)

(* = no prevoiced tokens)

Table 3. French and English monolinguals' mean VOTs for /b,d,g/. In this and subsequent tables, standard deviations are presented in parentheses.

In addition, the French monolinguals produced short-lag /b,d,g/ VOTs that were somewhat shorter than those of the English monolinguals (12.90 msec versus 20.91 msec). And only one English monolingual (LN) produced a mean VOT that overlapped with the means of the French monolinguals. For both groups, there was relatively little between-subject variability, with the standard deviation being 3.83 for the French monolinguals and 4.63 for the English monolinguals. The French monolinguals' mean VOTs for /b/, /d/, and /g/ were 1.07, 15.54, and 20.62 msec, respectively, while the English monolinguals' mean VOTs for /b/, /d/, and /g/ were 13.41, 17.52, and 31.79 msec, respectively. (The very short VOT for /b/ in French was due to the inclusion of VOTs of 0.00 in the averaging of the short-lag VOTs.)

The difference in the mean VOT values for /p,t,k/ produced by the two groups was quite salient, with the French monolinguals producing /p,t,k/ with a mean VOT of 25.85 msec—about 52 msec shorter than the English monolinguals' mean of 78.36 msec (Table 4).

French Monolinguals		*English Monolinguals*	
CS	35.70	JN	109.00
FS	22.12	LN	98.12
FZ	28.45	MK	82.45
LW	21.05	MM	67.84
MD	19.51	NM	71.43
OC	33.32	RR	63.10
YD	20.83	TS	56.60
$\bar{x}$	25.85	$\bar{x}$	78.36
s	(6.61)	*s*	(19.20)

Table 4. French and English monolinguals' mean VOT for /p,t,k/.

The French monolinguals' mean VOTs for /p/, /t/, and /k/ were 20.06, 22.85, and 34.66 msec, respectively, while the English monolinguals' mean VOTs for /p/, /t/, and /k/ were 65.80, 80.38, and 88.91 msec, respectively. (These values are extremely close to those obtained by Flege and Eefting, 1987b, for their 9-10-year-old native speakers of English. In fact, their mean for the children's English long-lag stops was virtually identical—at 78.67 msec—to the one obtained in this study.)

Also of interest is the graphic presentation of the means for /b,d,g/ and for /p,t,k/ for the two groups (Figure 2). Here, three aspects of the data are especially clear: The two monolingual groups performed differently across the stop consonants, the short-lag /b,d,g/ VOTs were similar in value to the /p,t,k/ VOTs for the French monolinguals but not for the English monolinguals, and VOTs generally changed with place of articulation.

A 3-way partially repeated-measures ANOVA with a 2 x 2 x 3 factorial design (group x voicing x place of articulation) was conducted. It revealed a significant main effect for group [F(1,10) = 54.00, p<.0001], voicing[4] [F(1,10) = 44.73, p<.001], and place of articulation [F(2,20) = 35.07, p<.0001]. There was also a significant group x voicing interaction [F(1,10) = 17.24, p<.005]. (The within-groups degrees of freedom were 10 and 20 in these analyses because one French monolingual produced no short-lag /b/ tokens and another produced no short-lag /d/ tokens; in these cases, all /b/ and /d/ tokens were prevoiced.) Because there was no significant 3-way interaction, comparative statistical analysis at the level of each phoneme was not conducted. However, examination of the data suggested that the French monolinguals' VOTs were systematically shorter than those of the English monolinguals for all phonemes but /d/, for which there was overlap between the two groups.

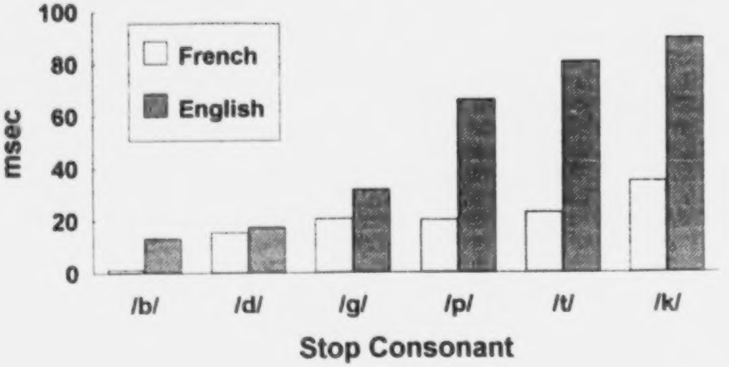

Figure 2. French and English monolinguals' mean VOTs for each stop consonant. In this and Figure 3, each bar represents the mean of 70 tokens, excluding the few not suitable for acoustic analysis.

Thus, there was a significant overall difference in the VOTs produced by the French and English monolinguals. There were also significant differences in VOT depending upon the voicing of the consonant (/b,d,g/ versus /p,t,k/) and upon place of articulation. It has been well documented that, due to articulatory factors, labial stop consonants are shorter than alveolar stops which, in turn, are shorter than velar stops (see e.g., Flege & Eefting, 1987b; Lisker & Abramson, 1967; Smith, 1978). This was observed among these subjects as well.

Since an ancillary objective of the present study was to determine whether or not VOTs from words produced in isolation exhibited VOTs unlike those from words produced in a carrier phrase, a separate analysis of /t/-initial VOTs in these two contexts was carried out with the French and English monolinguals. For the French monolinguals, the mean VOTs for /t/ in isolation and in context were 22.85 msec and 37.28 msec, respectively. For the English monolinguals, the mean VOTs for /t/ in isolation and in context were 80.38 msec and 65.85 msec, respectively. Thus, the contextualized /t/ values were longer than the isolated /t/ values for the French monolinguals, but shorter for the English monolinguals.

A 2-way partially repeated-measures ANOVA with a 2 x 2 factorial design (group x context) was conducted on the data for /t/. It revealed a significant main effect for group [F(1, 12) = 32.22, p<.001] and a significant group x context interaction [F(1,12) = 10.82, p<.01]. Matched t-tests indicated that there was a significant difference in the /t/ VOTs of isolated versus contextualized utterances for the French monolinguals [t(6) = 14.16, p<.01] but not for the English monolinguals. Given these conflicting findings, it was determined that the contrast between isolated and contextualized /t/ should be explored further in the analysis of the French-English bilinguals' VOTs.

Finally of interest is the performance of the two sets of siblings in the two monolingual groups. That is, did the two members of each of the pairs perform more similarly to one another than did any of the other subjects? Inspection of the data reveals ambiguous results. Specifically, in terms of prevoicing, the French monolingual siblings CS and FS did not appear to function more similarly than did any other two of the subjects in their group, nor did the English monolingual siblings JN and LN. However, MD and YD (fraternal twins) produced the two shortest mean VOTs for short-lag stops in the French monolingual group, and MM and NM produced mean VOTs that were within about 3 msec of one another for short-lag stops. Likewise for /p,t,k/ neither CS and FS nor JN and LN seemed to produce VOTs that were especially similar; however MD and YD as well as MM and NM had mean VOTs that were within 2 to 4 msec of one another. This is noteworthy in view of the fact that the French monolingual group's values had a mean range of about 17 msec and the English monolingual group's values had a mean range of about 52 msec. The two sets of siblings that did not perform similarly were male-female pairs, while those that did perform similarly were male-male pairs. This would suggest that, among the French-English bilinguals, the two same-sex pairs of siblings might produce VOTs that were especially similar.

French-English bilinguals. It will be recalled that two of the major questions posed in this study were as follows: Can an early fluent bilingual keep his/her two phonetic (specifically VOT) systems separate? If so, to what extent are the resulting systems monolingual-like? Three sets of comparative analyses are required if these questions are to be answered in full. These include comparison of the French-English bilinguals' production of VOT in French and English, comparison of the French-English bilinguals' and French monolinguals' production of VOT in French, and comparison of the French-English bilinguals' and English monolinguals' production of VOT in English. These analyses are presented below.

Among the French-English bilinguals, the mean VOTs for prevoiced /b,d,g/ were quite similar in both of their languages, with a value of -69.18 msec for their French and a value of -70.31 msec for their English (Table 5). Moreover, in both languages, the bilinguals prevoiced a similar number of utterances—116 (55.23%) in French and 131 (62.37%) in English. While most subjects prevoiced an approximately equal number of consonants in both languages, one bilingual (RG) prevoiced six in French but 23 in English; another (SF) prevoiced 14 in French but only three in English.

	French		*English*	
	Prevoiced	Short-lag	Prevoiced	Short-lag
JP	-71.76	19.54	-67.38	12.36
MP	-87.92	12.67	-98.09	14.16
MR	-61.23	6.45	-69.14	5.70
NG	-68.78	7.24	-71.31	9.57
RG	-58.81	0.00*	-58.10	0.00*
RN	-81.33	4.66	-59.86	7.96
SF	-54.41	11.86	-68.31	16.05
$\bar{x}$	-69.18	8.92	-70.31	9.40
s	(12.21)	(6.35)	(13.20)	(5.47)

(* = consonantal release and phonation onset were coterminous)

Table 5. French-English bilinguals' mean VOTs for /b,d,g/ in French and English.

The bilinguals' short-lag /b,d,g/ VOTs were likewise similar across their two languages, with a mean VOT of 8.92 msec in French and 9.40 msec in English. Short-lag values ranged from 0.00 (coterminous voicing) to 19.54 msec in French, and from 0.00 to 16.05 msec in English. There was little systematicity in the short-lag VOTs. That is, four of the seven subjects produced shorter VOTs in French than in English, two produced longer VOTs in French than in English, and one produced VOTs of 0.00 msec in both languages. In both languages, subjects exhibited relatively little betweem-subject variability: In French their standard deviation for the short-lag VOTs was 6.35, while in English it was 5.47. The bilinguals' mean VOTs for /b/, /d/, and /g/ in French were 5.35, 9.03, and 12.37 msec, respectively, while their mean VOTs for /b/, /d/, and /g/ in English were 2.12, 9.85, and 14.28 msec, respectively.

In terms of their production of VOT for /p,t,k/, the bilinguals had a mean VOT of 33.77 msec in French and a slightly longer mean VOT of 47.10 msec in English (Table 6). There was less variability in the VOTs in French than in English, with standard deviations of 4.88 and 17.56 msec, respectively. All of the bilingual subjects produced relatively short mean VOTs for /p,t,k/ in French, but three (MR, RN, and SF) produced relatively long (and nearly identical) mean VOTs in English. The bilinguals' mean VOTs in French for /p/, /t/, and /k/ were 28.93, 27.70, and 44.69 msec, respectively, while in English for /p/, /t/, and /k/ they were 34.13, 51.40, and 55.75 msec, respectively.

	French	*English*
JP	39.53	37.23
MP	37.79	32.25
MR	32.62	64.49
NG	36.07	36.10
RG	28.01	27.42
RN	26.70	65.31
SF	35.69	66.87
$\bar{x}$	33.77	47.10
s	(4.88)	(17.56)

Table 6. French-English bilinguals' mean VOTs for /p,t,k/ in French and English.

Graphic presentation of the means for /b,d,g/ and for /p,t,k/ for the French-English bilinguals' productions of VOTs in French and English reveals that, with the exception of the VOTs for /b/, their mean French VOTs were shorter than were their mean English VOTs (Figure 3). And, in general, the bilinguals' VOTs followed the predicted place-of-articulation durational pattern.

A 3-way repeated-measures ANOVA with a 2 x 2 x 3 factorial design (language x voicing x place of articulation) was conducted. It revealed no significant main effect for language but a significant main effect for voicing [F(1,6) = 88.12, p<.001] and for place of articulation [$F(2,12) = 25.51$, $p < .0001$]. There was also a significant language x place-of-articulation interaction [$F(2,12) = 7.73$, $p < .005$]. As in the analysis of the French and English monolinguals' VOTs, there was no significant 3-way interaction so comparative statistical analysis at the level of each phoneme was not conducted. However, a 2-way repeated measures ANOVA with a 2 x 3 factorial design (language x place of articulation) suggested that the significant interaction that did emerge was due to the fact that, in French, the bilinguals' mean VOTs for the labial stops were close to their mean VOTs for the alveolar stops. This result did not obtain in their production of the labial and alveolar stops in English; here their alveolar VOTs were noticeably longer than were their labial VOTs.

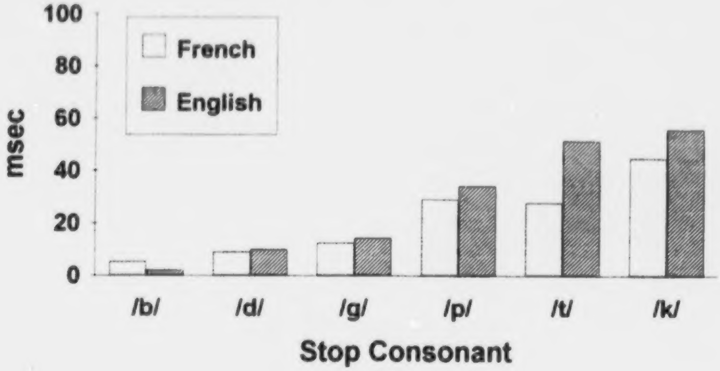

Figure 3. French-English bilinguals' mean VOTs for each stop consonant.

Thus what is apparent is that, overall, there was no significant difference in the French-English bilinguals' VOTs in French and English. The lack of a significant difference is in part due to the fact that, while four of the bilinguals produced /p,t,k/ VOTs that were quite similar in French and English (in the range of about 27 to 37 msec), three of the bilinguals produced mean /p,t,k/ VOTs that were not similar in French and English. That is, the VOTs produced in English by these three bilinguals exhibited durations that were substantially longer (at about 65 msec) than any produced by the other bilinguals or by the French monolinguals. These findings suggest that—at least for /p,t,k/—three of the bilinguals had two discrete phonetic systems for French and English, while the remaining four had shared systems.

Again, as was done with the French and English monolinguals, analysis of VOTs for /t/-initial VOTs produced in isolation and in context was carried out. In French the bilinguals produced mean VOTs of 27.71 msec and 43.87 msec for /t/ in isolation and in context, respectively. By contrast, in English the bilinguals produced mean VOTs of 51.40 msec and 52.55 msec for /t/ in isolation and in context, respectively. Thus, the contextualized /t/ VOTs were longer than the isolated /t/ VOTs for the bilinguals in French, while the opposite was true of their /t/ VOTs in English.

A 2-way repeated-measures ANOVA with a 2 x 2 factorial design (language x context) was conducted on the /t/ VOTs. Results revealed no significant main effect for language or for context but a significant language x context interaction [$F(1,6) = 26.12$, $p < .01$]. Matched t-tests indicated that there was a significant difference in the /t/ VOTs of isolated versus contextualized utterances for the bilinguals in French [$t(6) = 15.23$, $p<.01$] and in English [$t(6)$, $= 4.63$, $p < .05$].

Also, in view of the findings from the French and English monolinguals, it was of interest to examine the performance of the two sets of siblings in the bilingual group to determine whether or not the two members of each pair performed more similarly than did the other subjects. Inspection of the data suggests that they did not. That is, with respect to prevoiced and short-lag VOTs in French and English, neither siblings JP and MP nor NG and RG functioned more similarly than did the other subjects. Nonetheless, in producing /p,t,k/ in English, both pairs of siblings had VOTs that were quite short, and in neither of the pairs did one sibling produce long-lag VOTs for /p,t,k/ while the other produced short-lag VOTs.

Two final comparisons were carried out in order to more clearly reveal whether or not the French-English bilinguals were able to maintain two distinct phonetic systems and, if they did, whether or not either of their systems matched those of the monolingual speakers of French and English.

For the comparison of the French produced by the French-English bilinguals and the French produced by the French monolinguals, a 3-way ANOVA with partially repeated measures and a 2 x 2 x 3 factorial design (group x voicing x place of articulation) was conducted. It yielded no significant main effect for group and no significant group x voicing x place-of-articulation interaction. (Other significant effects were obtained, but they are not pertinent to this analysis.) In other words, although the French-English bilinguals produced shorter mean /b,d,g/ VOTs and longer mean /p,t,k/ VOTs than did the French monolinguals, these differences were not statistically significant and can thus only be considered possible trends.

For the comparison of the English produced by the French-English bilinguals and the English produced by the English monolinguals, another 3-way ANOVA with partially repeated measures and a 2 x 2 x 3 factorial design (group x voicing x place of articulation was carried out. Results revealed a significant main effect for group [$F(1, 12) = 20.48$, $p < .001$] but no significant group x voicing x place-of-articulation interaction. (Again, as in the above analysis, other significant effects were obtained, but they will not be considered here.) Thus, in general, the French-English bilinguals produced VOTs in English that were shorter than those produced by the English monolinguals.

Summary of Results

The authors of the present study conducted a speech production experiment in which they carried out comparative analyses of VOTs produced in word-initial stop consonants by seven French monolingual children, seven English monolingual children, and seven French-English bilingual children.

Results of the analysis revealed that, as predicted, the French and English monolinguals exhibited distinct and language-specific phonetic categories, with the French monolinguals producing VOTs that were in the prevoicing and short-lag ranges, and with the English monolinguals producing VOTs that were in the short- and long-lag ranges. Specifically, the French monolinguals utilized prevoicing in /b,d,g/ to a much greater degree than did the English monolinguals. That is, the French monolinguals prevoiced 80% of their word-initial stops, in contrast to the English monolinguals who prevoiced only about 10%. In addition, the French monolinguals produced /p,t,k/ with a mean VOT of about 26 msec while the English monolinguals produced /p,t,k/ with a mean VOT of about 78 msec. In these respects, the French and English monolinguals' patterns of prevoicing were consistent with the results of previously conducted studies regarding VOT in French and English.

It was also noted that, for the French monolinguals, the VOTs of /t/-initial words produced in isolation were significantly shorter than those of /t/-initial words produced in a carrier phrase (i.e., in context). However, for the English monolinguals, there was no significant effect of /t/ context upon its duration.

Of further interest was the fact that members of only one of the two sets of siblings in both the French monolingual and English bilingual groups appeared to perform similarly with respect to VOT. It was suggested that this was due to the fact that the members of the pairs that performed similarly were same-sex siblings (i.e., male-male), unlike those who did not perform similarly (i.e., male-female).

The VOTs of the French-English bilinguals were examined in view of the above-cited findings. Analysis of their VOT data indicated that the bilinguals prevoiced about 55% of their French /b,d,g/-initial words and about 62% of their English /b,d,g/-initial words. Moreover, their mean short-lag VOTs for /b,d,g/ were nearly identical in the two languages. In this respect, the bilinguals' French and English phonetic systems appeared quite similar. In producing VOTs for /p,t,k/, the bilinguals likewise performed similarly in their two languages, with their French VOTs for these consonants having a mean value of about 34 msec and their English VOTs having a mean value of about 47 msec. Statistical analysis revealed no significant main effect for language, again suggesting that the phonetic systems of their two languages were not differentiated. Yet the /p,t,k/ VOTs for three of the bilinguals indicated otherwise. That is, subjects MR, RN, and SF all had French VOTs that were approximately 30 to 40 msec shorter than their English VOTs, suggesting that these subjects did have two distinct phonetic systems, at least for /p,t,k/.

Analysis of the /t/ VOTs produced in isolation and in a carrier phrase revealed that, in French, the bilinguals' VOTs for /t/ produced in isolation were significantly longer than for /t/ produced in a carrier phrase. But in English, the bilinguals' VOTs for /t/ produced in isolation were significantly shorter than for /t/ produced in a carrier phrase. This pattern was similar to that observed in the French and English of the monolinguals.

In terms of the performance of the two sets of siblings in the French-English bilingual group, there was no clear evidence that the siblings produced VOTs that were more similar than the VOTs of any other pairs of subjects.

Two final analyses were conducted to determine whether or not the bilinguals functioned in French as the French monolinguals did and in English as the English monolinguals did with respect to their use of VOT. Statistical analysis of the data revealed no significant main effect for group when the VOTs produced in French by the French monolinguals and the French-English bilinguals were compared. On the other hand, when the VOTs produced in English by the English monolinguals and the French-English bilinguals were compared, a signficant main effect for group did emerge. These findings suggest that the bilinguals' phonetic systems for French and English were partially differentiated and that the bilinguals' French system closely matched that of the French monolinguals, while their English system approximated, but remained distinct from, that of the English monolinguals.

DISCUSSION

It will be recalled that the present study was undertaken in order to answer three main questions of relevance to the study of bilingualism: (1) Do fluent early bilinguals who have acquired their two languages with naturalistic native-speaker input maintain two distinct phonetic systems? (2) If they are distinct, do the two phonetic systems of fluent early bilinguals match those of monolingual speakers? (3) What might be some possible causes for the patterns of organization in the phonetic system(s) of fluent early bilinguals? It is now possible to address these questions in light of the VOT data obtained from the French and English monolinguals and from the French-English bilinguals who participated in this study.

Two Phonetic Systems or One?

In their production of words in French and English, it was apparent that the French-English bilinguals did not consistently differentiate between the phonetic systems of their two languages—in spite of their early and lengthy exposure to English and French produced by native speakers. That is, the bilinguals prevoiced /b,d,g/ in nearly the same number of tokens across their two languages, even though French is generally found to have regularly prevoiced stop consonants while English does not. Furthermore, there was no significant difference in the bilinguals' VOTs for French versus English /p,t,k/. Yet closer examination of the data reveals that it would be premature to claim that none of the bilinguals had separate phonetic systems for French and English.

First, the bilinguals' production data revealed that their VOTs for the isolated and contextualized /t/-initial words depended upon whether or not they were speaking French or English. When they produced the French /t/ in isolation, it was (somewhat surprisingly) significantly shorter than when they produced it in the carrier phrase, Tous les. . . . Yet when they produced the English /t/ in isolation, it was (as expected) significantly longer than when they produced it in the carrier phrase, *Two little*. . . . Clearly, such a finding indicates that the bilinguals were sensitive to some cross-linguistic distinction between the French and English /t/. It is possible that, in spite of the attempt to provide the bilinguals with phonemically comparable carrier phrases, some property associated with the words *tous* and *two* caused the bilinguals to treat these words differently in production, with *tous* perhaps receiving greater stress than *two*. Whatever the cause, it is apparent that—in terms of producing isolated versus contextualized /t/—the bilinguals did differentiate between their French and English.

A second important insight emerges from the fact that three of the bilinguals—MR, RN, and SF—did maintain separate systems for their French and English VOTs in their production of /p,t,k/. What is particarly noteworthy is that these three bilinguals had similar mean /p,t,k/ VOTs in French (26.70, 32.62, and 35.69 msec) and similar mean /p,t,k/ VOTs in English (64.49, 65.31, and 66.87 msec.) This suggests that at least certain early French-English bilinguals develop and maintain a stable distinction between stop consonants in the /p,t,k/ category for their two languages. By contrast, the other four bilinguals clearly did not maintain a distinction between their French and English /p,t,k/. In fact, for these four bilinguals, the /p,t,k/ VOTs in French and English had short lags, and they differed across the two languages by no more than 6 msec in duration for each subject.

Obviously, then, individual differences must be taken into consideration in any discussion of the phonetic systems of bilinguals—even when those bilinguals are apparently homogeneous in terms of their language-acquisition history. This becomes particularly apparent when the language-background data of the three above-cited bilinguals—MR, RN, and SF—are re-examined. As Table 2 revealed, all of these subjects were given ratings of 10 in French proficiency by their mothers. For English, MR was given a rating of 4 (one of the lowest ratings obtained) while RN and SF were given ratings of 10 (the highest rating possible). Moreover, the percent of time spent speaking English in the home ranged from 40% for SF and MR to 90% for RN. If the mothers' language ratings and assessments of the amount of English spoken in the home were valid, MR, RN, and SF should have performed dissimilarly. Yet all three performed nearly identically in their production of /p,t,k/ in English.

Additional evidence regarding the role of individual differences is derived from the analysis of the VOTs produced by the six sets of siblings. The production data revealed that only two of the sets of siblings (the French monolingual fraternal twins MD and YD and the English monolingual brothers NM and MM) appeared to function quite similarly, in spite of the fact that all six of the sibling pairs were probably provided with nearly identical linguistic environments and input.

But what evidence is there that individual differences do play a role in speech production ability? Shore (1995) addressed this question in her examination of individual differences among children acquiring their L1. She states that "some children . . . seem to focus on individual sounds, whereas others . . . seem to emphasize the sound characteristics of the utterance as a whole. . . . [Others] tend to be risk takers in the overall pattern of additions to the phonological system" (p. 33). Further support for the role of individual differences in language acquisition comes from a study conducted by Humes-Bartlo (1989). She evaluated the cognitive ability of 71 third-, fourth-, and fifth-grade students and, using discriminant analysis, distinguished between fast and slow learners of English as an L2. She concluded that her study can provide

> a neuropsychological framework for the study of second language learning aptitude, and underline the existence of individual differences in human cognitive skills. . . [It also] indicates that differences in ability may be based on factors which have not previously been widely considered (p. 52).

Hence it can be concluded that reasons for the differences in the production of English VOTs by the French-English bilinguals in the present study may be quite difficult to determine. This is not to state that individual differences do not exist, nor that their role is negligible.

Bilingual Versus Monolingual Systems

Analysis of data obtained from the French and English monolinguals revealed salient and statistically significant differences in their production of VOT. Thus, it was possible to compare their VOTs with those obtained from the French-English bilinguals to determine to what extent the bilinguals had monolingual-like phonetic systems. It was believed that, in this way, the bilinguals' accuracy in producing target-language utterances could be evaluated.

The most obvious feature of this analysis was that the French-English bilinguals' VOTs for words produced in French did not differ significantly from those of the French monolinguals; still their VOTs for words produced in English did differ significantly from those of the English monolinguals. Overall, then, in French the bilinguals produced VOTs that were monolingual-like. However, in English, the bilinguals produced VOTs that approximated, but did not match, those of the English monolinguals.

The bilinguals' use of intermediate VOT values is especially obvious when the mean VOTs for /p,t,k/ are examined. As can be seen below, the bilinguals' mean /p,t,k/ VOTs were intermediate to those of the monolinguals (although it will be recalled that the difference between the French monolinguals' mean of 26 msec and the bilinguals' mean for French of 34 msec was not statistically significant).

Monolinguals' VOT in French:	26 msec
Bilinguals' VOT in French:	34 msec
Bilinguals' VOT in English:	47 msec
Monolinguals' VOT in English:	78 msec

It appears as if there is a kind of tension between the two endpoint values of 26 and 78 msec, with the bilinguals' VOTs being 'pulled' toward the 26-msec value in French and toward the 78-msec value in English, or with the bilinguals' VOTs retracting toward a central compromise value.

Possible Explanations for the Results

It is clear that, within the group of seven early French-English bilinguals, there were two types of subjects—those whose French and English phonetic systems were at least partially merged and those whose French and English systems were somewhat more separate. It may be that any single theoretical framework or model cannot adequately account for this apparent lack of a consistent pattern among the early French-English bilinguals. Therefore several possible (and not necessarily mutually exclusive) explanations will be proposed.

A particularly interesting hypothesis about second-language acquisition has been provided by Flege (1988, 1991, 1995) in his speech learning model (SLM). The SLM provides an explanation for the widely observed difference in the ability of early and late learners to implement L2 phonemes. Flege (1991, p. 407) describes the SLM as follows:

> The SLM posits that after phonetic categories have been established for L1 sounds in early childhood, listeners are increasingly likely to identify L2 sounds that partially resemble corresponding sounds in the L1 (referred to as 'similar' sounds) as being realizations of an L1 category. Late learners will persist in identifying similar L2 sounds such as Spanish and English /t/ [as similar], whereas early learners will eventually note the acoustic phonetic differences between them.

So, in this model, it is easier to produce a new phonetic unit in a second language if that unit does not already exist in the L1. If it is similar to one in the L1, language learners may erroneously form a single mental representation for the new phonetic unit (Flege & Hillenbrand, 1984).It appears that Flege's SLM would predict that the early French-English bilinguals in the present study should have had two distinct VOT systems—one appropriate to French and the other appropriate to English—because they were exposed to native-speaker French and native-speaker English well before internalized phonetic representations of the phonemes were established. That is, for the early bilinguals for whom both French and English were native languages, all French and English phonemes should have been considered new and should therefore have been produced accurately. Yet only some of the bilinguals seemed to have treated their French and English phonemes as new, thereby maintaining two discrete VOT systems. It is not immediately apparent how Flege's SLM would deal with the finding that none of the bilinguals maintained two distinct systems *and* produced monolingual-like VOTs in both of their languages.

A somewhat different cognitively based explanation for the performance of the French-English bilinguals may be found in the work of MacWhinney (1987). He has stated that, if a bilingual can fully separate his languages, "errors will be kept at a minimum. However, the cost of this organization of two full sets of processing relations is fairly high and the bilingual may attempt to make short-cuts" (p. 322). It could be argued that such a cognitive short-cut is the use of a single bilingual phonetic system (such as that exhibited by at least four of the bilinguals) that is intermediate to the monolingual systems of the two languages. Yet this explanation does not account for the fact that three of the bilinguals maintained at least partially separate systems in French and English.

A related neurologically based description of bilingual linguistic organization has been proposed by Paradis (1985) in his tripartite system hypothesis. He states that "those items which are identical in both languages are represented by one single underlying neural substrate common to both languages, and those which are different each have their own separate neural representation" (p. 20). Thus it may be that certain aspects of some early bilinguals' phonetic systems have a common neural substrate (or network) while others do not. While the neural architecture of the bilingual phonetic system is not at all well understood, Paradis' tripartite hypothesis does suggest that a connection between the linguistic organization of a bilingual's languages and their neural representation can be proposed. What is still needed here, however, are operational definitions of the terms *identical* and *different*. Indeed, as Flege (1995) has indicated with respect to the terms *identical*, *similar*, and *new* in a recent revision of the SLM, it is probably more appropriate to suggest that there is a continuous range in the magnitude of possible L1-L2 sound differences, rather than maintaining that cross-linguistic units contrast dichotomously or trichotomously. What is of relevance in the present study is the likelihood that the magnitude of possible sound differences was actually specific to each language learner.

A final explanation regarding the French-English bilinguals' phonetic systems is perhaps the most straightforward one. It will be recalled that the five mothers of the bilinguals had all lived, at the time their children were tested, from 9 to 14 years in France. It was considered possible that their prolonged exposure to French had influenced their production of English, such that their English was no longer monolingual-like. If this were the case, their children would not have received monolingual-like English input.

Therefore, at the time the children were tested, a decision was made to record the speech of their mothers. Materials, procedure, and data analysis were identical those used with the bilingual children. Subsequent analysis of the mothers' VOTs did indeed reveal that their French was (not surprisingly) not monolingual-like. But neither was their English.

Specifically, the mothers prevoiced an average of 56.67% of their /b,d,g/ VOTs in French (considerably less than the 80.00% of the French monolinguals) and an average of 44.00% of their /b,d,g/ VOTs in English (much more than the 10.47% of the English monolinguals). Moreover, their mean /p,t,k/ VOT in French was 41.56 msec, about 15 msec longer than that of the French monolinguals. And their mean /p,t,k/ VOT in English was 55.69 msec, about 23 msec shorter than that of the English monolinguals. (The mothers' English /p,t,k/ VOTs ranged from a mean of about 48 to 59 msec.) In spite of the rather substantial shortening of their English VOTs, statistical analysis revealed that the mothers' VOTs in French and English remained significantly different. Thus, in general they had maintained two separate phonetic systems; their systems were simply intermediate to those of the French and English monolinguals.

Hence, to the extent that their mothers were the bilingual children's primary source of information about the English phonetic system, and to the extent that the bilingual children modeled their speech after that of their mothers, they may have accurately acquired a French-accented English sound system. Thus it might be said that the children had acquired the phonetic equivalent of a creole.

On the other hand, it must be recalled that there were two subgroups of French-English bilingual children—the four bilinguals who had essentially merged their French and English VOTs (at least for /p,t,k/) and the three bilinguals who had not. If the children's patterns of VOT production were based upon the VOTs produced by their mothers, there should have been some correspondence between the VOTs of the mother-child pairs. Yet no such correspondence was apparent. The mothers of the four children who produced short-lag /p,t,k/ VOTs in English produced long-lag VOTs (as did the mothers of two of the children who produced long-lag /p,t,k/ VOTs). And the mother with the shortest mean VOT in English had a child with one of the longest. (It is possible that the mothers' English VOTs had shifted in the years since their children were first exposed to them, accounting in part for these apparent anomalies.)

Thus, in their linguistic development, the bilingual children were linguistically influenced to some extent by their native-English speaking mothers. Indeed, had they not been, none would have been able to speak English. Yet the influence of the mothers on their bilingual children did not manifest itself as a set of phonetic mirror images. Rather it was an array of imperfect reflections. It appears then that the bilingual children may have simply generated their own system(s) for French and English once they received a requisite amount of phonetic input from their native-English-speaking mothers.

CONCLUSION

Comparative analysis of the VOTs produced by the French and English monolinguals and the French-English bilinguals has provided several insights into the structure of the phonetic systems of the fluent early bilingual. First, it appears that at least some interaction or interlingual identification occurs between the bilingual's two phonetic systems, and this may be an inevitable consequence of bilingualism. Second, even early and prolonged exposure to two languages does not guarantee that two distinct monolingual-like systems will develop. And third, the potentially complex linguistic patterns that result when the two languages of a bilingual come into contact with one another remain powerful reminders that the bilingual brain has many stories yet to be told.

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NOTES

[1] As Baetens Beardsmore (1986) points out, there is considerable lack of agreement regarding the meaning of the term *bilingualism*. In this study, an individual is considered a bilingual if he/she can function reasonably well in either of the two languages under consideration. In addition, an early bilingual is here considered an individual who has acquired one or both of his/her languages during childhood (i.e., prior to about age eight). In the present experiment, all of the early bilinguals were actually simultaneous bilinguals

or acquirers of two first languages, since all acquired both of their languages prior to age 3 (Klein, 1986; McLaughlin, 1984). And, although some researchers maintain that it is inappropriate to expect a bilingual to be two monolinguals in one person (e.g., Grosjean, 1989), many other researchers have concluded that determining the extent to which a bilingual's two systems are shared or separate necessitates comparative analysis using monolingual speakers of each of the two languages.

[2] It should be noted, however, that the stop consonants in some languages cannot be adequately classified solely with reference to these three modal categories, as indicated by Kim (1965) with respect to Korean and by Dixit (1989) with respect to Hindi. Keating (1990) has provided a model in which the consonant closure and the consonant release are characterized by [± voicing] and [± spread glottis], respectively. This model permits a four-way distinction which is thus applicable to contrasts in languages such as these.

[3] Additional materials were presented in the same testing session but in a separate task. These materials were designed to permit the evaluation of voicing-conditioned vowel duration (e.g., the difference in the duration of the medial vowel in a word such as *back* versus *bag*. Because English appears to have a sytematically larger durational distinction in the voiced versus voiceless context than does French (Laeufer, 1992; Mack, 1982; Port & Dalby, 1982), and because there are consistent cross-language differences in the use of this cue (Chen, 1970; Crowther & Mann, 1992), it was also of interest to determine how the bilingual children would perform with respect to this temporal feature. However, analysis of the vowel duration results is beyond the scope of the present study.

[4] For ease of presentation, the variable characterizing the contrast between the class of phonemes /b,d,g/ versus /p,t,k/ is here termed *voicing*. The use of this term is not intended to convey a theoretically significant claim regarding the status of the phonetic feature [±voice] or its applicability with respect to these phonemes in French and English.

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APPENDIX 1

Bilingual child's language-background questionnaire.

1. Child's name:______________________________
2. Child's birthdate:____________________
3. Child's native language:____________________

   (Note: If your child acquired French and English simultaneously from infancy, list both languages as her/her native languages. Otherwise, list the first language acquired as the native language.)

4. Child's second language:____________________
5. Age at which child acquired the second language:_____
6. Native language of child's mother:____________________
7. Native language of child's father:____________________
8. Percentage of time that French is spoken at home:_____
9. Percentage of time that English is spoken at home:_____

Please circle yes or no in response to the following questions.

10. Does your child speak French as well as any French monolingual child of his/her age? YES NO
11. Does your child understand French as well as any French monolingual child of his/her age? YES NO
12. Does your child speak English as well as any English monolingual child of his/her age? YES NO
13. Does your child understand English as well as any English monolingual child of his/her age? YES NO
14. Can your child speak and/or understand any language(s) other than French or English? YES NO
15. If you answered yes to question 14, indicate which other language(s) your child can speak and/or understand.____________________

APPENDIX 1 (cont'd)

16. If you answered yes to question 14, briefly describe the foreign-language experience of your child and make any other comments which you think might be of interest concerning his/her language experience.

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17. On the following scale of 0 to 10, rate your child's overall proficiency in French by circling the appropriate number. (On this scale, a child who has no knowledge of French would receive a 0. A child who has native-like proficiency in French would receive a 10.)

0 1 2 3 4 5 6 7 8 9 10

18. On the following scale of 0 to 10, rate your child's overall proficiency in English by circling the appropriate number. (On this scale, a child who has no knowledge of English would receive a 0. A child who has native-like proficiency in English would receive a 10.)

0 1 2 3 4 5 6 7 8 9 10

****

I agree to let my child participate in Molly Mack's language study. I understand that my child will be tape recorded and that my child's identity will remain confidential in any reports which result from this study.

______________________________ Parent's Name

_______________ Date

APPENDIX 2

French monolingual child's language-background questionnaire.

1. Nom de l'enfant:______________________________
2. Date de naissance de l'enfant:____________________
3. Langue maternelle de l'enfant:____________________
4. Langue maternelle de la mère de l'enfant:____________________
5. Langue maternelle du père de l'enfant:____________________
6. Votre enfant peut-il parler et (ou) comprendre aucune autre langue étrangère? (Encerclez oui ou non.) OUI NON
7. Si vous avez répondu oui à la question 6, indiquez quelle(s) langue(s) votre enfant parle et (ou) comprend:______________________________
8. Si vous avez répondu oui à la question 6, décrivez brièvement l'expérience que votre enfant a eue et faites d'autres commentaires que vous pensez pouvoir être utiles en ce qui concerne son expérience au point de vue langues.

____

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****

Je consens à ce que mon enfant participe à l'étude linguistique de Molly Mack. Un enregistrement sur bande sera fait de mon enfant et son identité restera confidentielle dans tous comptes rendus issus de cette étude.

________________________________ Nom de parent

________________ Date

APPENDIX 3

English monolingual child's language-background questionnaire.

1. Child's name:______________________________
2. Child's birthdate:____________________
3. Child's native language:____________________
4. Native language of child's mother:____________________
5. Native language of child's father:____________________
6. Can your child speaker and/or understand any foreign language?
   (Circle yes or no.) YES NO
7. If you answered yes to question 6, indicate which language(s) your child can speak and/or understand.______________________________
8. If you answered yes to question 6, briefly describe the foreign-language experience of your child and make any other comments which you think might be of interest concerning his/her language experience.

____

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****

I agree to let my child participate in Molly Mack's language study. I understand that my child will be tape recorded and that my child's identity will remain confidential in any reports which result from this study.

______________________________ Parent's Name

________________ Date

APPENDIX 4a

French words used in VOT analysis: Words presented in isolation.

/b/	/p/
baleine	pantalon
ballon*	papillon
banane*	poche
bateau	pomme
bébé*	poule

/d/	/t/
dents	table*
deux	tasse
dos	tente
douche	tête
douze	tigre*

/g/	/k/
gant	cadeau
garage*	camion
garçon	cou
gateau	kangourou*
guitare*	quatre

(* = member of a French-English cognate pair)

APPENDIX 4b

French words used in /t/ VOT analysis: Words presented in the carrier phrase, *Tous les. . . .*

ballons
chiens
garçons
oiseaus
pantalons

APPENDIX 5a

English words used in VOT analysis: Words presented in isolation.

/b/

baby*
balloon*
banana*
bike
boy

/p/

pants
pear
pencil
picture
pocket

/d/

deer
desk
dog
door
duck

/t/

table*
teeth
tent*
tiger*
two

/g/

garage*
gate
girl
guitare
gun

/k/

car
carrot
cat/kitty**
cup
kangaroo*

(* = member of a French-English cognate pair)
(** = either word was accepted)

APPENDIX 5b

English words used in /t/ VOT analysis: Words presented in the carrier phrase, *Two little. . . .*

balloons
birds
boys
dogs
pants

Symposium on
Action Research

IDEAL 8, 1995

SYMPOSIUM ON ACTION RESEARCH

INTRODUCTION

Numa Markee

What is action research? Two influential conceptualizations of this kind of research define it as "trying out new ideas in practice as a means of improvement and as a means of increasing knowledge about the curriculum, teaching and learning" (Kemmis & McTaggart, 1982) or as "small-scale intervention in the functioning of the real world and a close examination of the effects of such intervention" (Cohen & Manion, 1985). Thus, the immediate purpose of this kind of research—which is typically carried out by teachers for teachers—is to improve on one's own classroom practice. At a more abstract level, however, an implicit aim of action research—at least, as this is defined by the writers cited above—is to engage teachers in a critique of what happens in the socially-constructed context of the classroom (see Candlin, 1984; Dewey, 1910; Freire, 1976; Pennycook, 1989, 1990; Stenhouse, 1975). In short, action research invites teachers to engage in a process of "theorizing from the classroom" (Ramani, 1987) as a means of developing critical theories of teaching which are empirically based on their own evolving professional development.

How do teachers define the problems they wish to investigate? Typically, a teacher will notice that something unusual is happening in her classroom. For example, she will notice that an activity prescribed by classroom materials does not work as well as expected. Or perhaps the teacher notices that a student's unexpected behavior triggers classroom discourse which is qualitatively quite different from what normally occurs in the class and becomes curious as to the reasons that might underlie this behavior. Or else a teacher becomes interested in whether a widely recommended technique produces the kinds of results that it is supposed to produce. In any case, having articulated the problem they wish to investigate, teachers then decide how they will set about solving it.

This diagnosis phase involves making decisions about what kind of research design is appropriate—for example, some problems are best addressed by using an experimental design, another will be more suited to an ethnographic treatment while still others will best be tackled by using a mixture of experimental and ethnographic approaches. This diagnosis phase is followed by a search and retrieval phase. That is, the teacher-researcher sets about gathering whatever information is relevant to her needs by carrying out a focused literature review of the relevant facts. After identifying the relevant issues, the teacher-researcher then carries out the research with a view to developing a practical solution to the problem she identified. When the study is completed, the teacher-researcher evaluates the effectiveness of the proposed solution and, if need be, engages in an on-going, recursive process of research and implementation, whose goal is to elaborate and fine-tune solutions over time.

Action research is an integral part of the curricular and teacher innovation (CATI) project currently underway in the ESL service courses at the University of Illinois at Urbana-Champaign. If we develop Stenhouse's (1975) idea that curriculum development and teacher development are two sides of the same coin, it is logical to define curricular innovation as "a managed process of development whose principal products are *teaching (and/or testing) materials, methodological skills and pedagogical values* that are perceived as new by potential adopters" (Markee, in press). For present purposes, I would like to emphasize the highlighted part of this definition. Teachers prepare materials for ESL courses as an entry point into the larger process of professional development. It is important to emphasize, however, that this process does not stop with the development of new materials—which are by far the easiest level of innovation to implement (Fullan, 1982a, 1982b, 1993). This process also involves teachers reflecting on and ultimately changing both their methodological behaviors and their philosophical beliefs about what constitutes good teaching. It is here that action research comes into its own as a powerful tool for promoting professional change.

The papers in this symposium illustrate in practical terms the theoretical principles discussed above. They are written by three teacher-researchers who have taught extensively in the graduate sequence of ESL courses at the University of Illinois at Urbana-Champaign. All have developed their own materials. Their action research reports—all of which use an ethnographic research methodology—show how they have moved on to tackle the more difficult dimensions of behavioral and attitudinal change that the CATI project seeks to promote. Let me now briefly discuss each contribution in turn.

Lai frames her discussion of her own preconceptions about a Korean female's public participation patterns in class within the theoretical framework of cultural studies. At first, Lai viewed this learner (identified as L15) as a rather passive, low-level learner who seemed to have little interest in class activities. However, when Lai investigated L15's classroom behavior in the privacy of small groups, she realized that, not only were her initial preconceptions about L15 inaccurate, they were the result of a cultural stereotype about the way Oriental females typically interact in class—a poignant insight, since Lai is herself Chinese-American. Lai's paper documents with remarkable candor and sincerity not only how her ideas about L15 changed but also how the insights that she gained into this learner's behavior changed the way she was teaching her class and also her ideas about the kinds of classroom interaction that are theoretically and practically desirable. In other words, she documents how her methodological behaviors and her ideological attitudes about teaching changed substantially through having done this research.

Chinitz looks at a problem which also involves culture, but from a different perspective: why did one learner (L3, also a Korean female) seem to thrive during small group work with one set of learners (all Koreans) but not in another group which was composed of learners from different language backgrounds? Chinitz frames this eminently practical problem in terms of second language acquisition theory, which predicts that task-based instruction in small groups is likely to promote the kinds of conversational adjustments that potentially make input comprehensible. However, Chinitz convincingly shows that, in L3's case, cultural differences between herself and L1, a Mexican female, about how individuals are expected to behave during conversations, led to L3 being completely marginalized from the second group's talk—thus depriving this learner of whatever opportunities for conversational adjustments task-based interaction in small groups is theoretically supposed to provide. Chinitz concludes that the task which she had set, which comes from the materials she had developed for the ESL service courses the previous semester, needed to be revised. In addition, she changed her ideas about how to manage the implementation of small group work in class and also changed her ideas about the potential acquisitional value of one-way information gap tasks. Again, we have an example of how action research leads to both behavioral and attitudinal change on the part of the teacher-researcher.

Finally, Noble explores whether peer-editing, a widely recommended technique in both L1 and L2 composition, actually leads to valuable revisions of ESL student's papers. As in the case of Lai's and Chinitz's papers, Noble situates his discussion within a specific theoretical framework: process-based approaches to teaching composition. Noble's paper juxtaposes in a rather fascinating way the suggestions for revision that learners make to each other during two peer editing sessions and the kinds of revisions which they actually made in their papers. Interestingly, the data which Noble presents in this paper do not confirm the fears that teachers and researchers in composition studies often express, namely, that learners' suggestions may lead to worse rather than better writing. Thus, in this case, the research which this particular teacher-researcher carried out led to his developing greater confidence in the pedagogical procedures that were called for by the materials that he was using. But enough summarizing: let me now invite readers to read these teacher-researchers' papers for themselves.

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IDEAL 8, 1995

THE EFFECT OF GROUP DYNAMICS AND TASK DESIGN ON LEARNER PARTICIPATION IN SMALL GROUP WORK

Lori Chinitz

Although ESL practitioners may feel alienated from most research being conducted in the field of SLA, those facing problems in the classroom can benefit from undertaking their own small-scale classroom research projects in order to determine the causes and possible solutions to these problems. In this paper one such undertaking is described. The teacher/researcher discovered that certain students were consistently participating less in small group work than others, and sought to determine why this was occurring and what changes, if any, could be made in both materials design and group composition to combat this problem.

INTRODUCTION

Many ESL teachers turn to group work as a way to solve problems of classroom management and to fulfill what they believe to be criteria for second language acquisition. However, the use of group work in itself does not assure that these criteria will be met. This paper will focus on two important factors: the affective climate fostered by the use of group work instead of lockstep work and the types of tasks involved.

The first consideration, affective factors, is listed by Long & Porter (1985) as one of five pedagogical arguments for the use of group work in second language learning:

> the potential of group work for increasing the quantity of language practice opportunities, for improving the quality of student talk, for individualizing instruction, **for creating a positive affective climate in the classroom**, and for increasing student motivation (pp. 207-208; emphasis mine).

Whereas traditional, lockstep classrooms in which students must speak "in the public arena" (p. 211) tend to promote anxiety, Long and Porter claim that small groups provide an intimate, supportive setting for trying out language skills (p. 211).

Several other recent studies (Pica, 1987; Pica & Doughty, 1985, 1988; Doughty & Pica, 1986) have addressed the role of task type in promoting second language acquisition. In Pica's 1987 study, she found that, while information-gap activities necessitated the use of clarification work, decision-making activities did not. As Pica says:

> Review of the transcripts of the study indicated that [in decision-making activities] individual students...did not have to interact with each other in order to reach a group decision. Each participant's contribution to the decision...had potential for helping other participants arrive at a group

> consensus, but was often ignored in the final decision. As a result, the more verbally assertive students monopolized the interaction, which led to what only appeared to be a 'group' decision. Although their teacher was absent during the decision-making discussion, one or two students in each group took on the teacher role, leading discussion and channeling communication for other participants. Typically, the less linguistically proficient students participated infrequently, with considerable gaps between speaking turns, while the more expressive students supplied most of the talk and took most of the turns (pp. 15-16).

The data presented in this paper support the notion that tasks which do not **require** a two-way exchange of information can fail to promote negotiation of meaning among all group members. While this failure is not always certain, it seems inevitable in any group in which one or more members is dominant. By providing examples of interactions in which a certain group member was more or less rendered uncommunicative by another member's zealous assumption of the leadership role, I hope to show that careful control of both task type and group makeup may sometimes be necessary to ensure that group work is indeed leading to modified interaction among the students.

BACKGROUND AND DESCRIPTION

The data presented in this paper come from a high intermediate ESL class taught at the University of Illinois at Urbana-Champaign in the Spring of 1994. This section, taught by the researcher, consisted of 17 class members; during the activities recorded, the class had broken up into groups of three to seven students each. On the first day of taping, the students were divided into groups according to their country of origin (Korea, Taiwan, Mexico, and Mainland China, plus a mixed group made up of one student each from Greece, Turkey, and Malaysia). This was the first day of a new unit on the subject of alcohol and tobacco advertising; the activities involved were intended as schema activators. The students received a list of referential and display questions and were asked to discuss and answer them in preparation for a presentation before the whole class.[1] The presentation was expected to revolve around the differences the students had noticed between advertising and advertising regulation in their countries and in the United States.

On the second day of taping, the students divided themselves into groups as they wished. The first task was to summarize the main points of the presentations made in the previous class. Each group would then share their interpretations of "the most important aspect of the presentations" with another group. This particular task was designed with the hope of creating built-in task dependency (thus encouraging the students to listen to their classmates during the presentations); not only would they have to create and share this list of main points, but they would be using this information in upcoming tasks and in their final papers.

In neither case was a group leader appointed by the teacher, nor were there any directions from the teacher for the groups to choose a leader themselves. In preparation for the presentation, overhead slides and pens were distributed for the students' use. Directions for the presentations were flexible, asking the students to choose and focus on the issues most interesting to or important for them.

ANALYSIS AND DISCUSSION

The analysis of data will focus on the interaction of one group consisting of five students, and primarily on the conversational style used by two students in that group, a Korean female (L3) and a Mexican female (L1). Data from the Korean group on the first day of taping will also be used to demonstrate that L3 tends to be quite vocal when grouped with cooperative interlocutors. However, several attempts by L3 to participate in discussion with a mixed group during the following class session are thwarted by the other group members, and particularly by the unofficial group leader, L1.

I intend to show that L3's behavior in the second, mixed group is indeed a result of her reaction to the more aggressive conversational style of L1. One of the benefits of group work, according to Long & Porter (1985), is that it allows students to engage in "teacher" functions (including suggesting, inferring, qualifying, hypothesizing, generalizing or disagreeing, topic-nomination, turn-allocation, focusing, summarizing and clarifying) not permitted them in lockstep work. L1, a more fluent and confident speaker, has assumed the role of leader and takes advantage of the opportunity to do this kind of talk. While such a tactic may prove to be of benefit to L1, L3 does not enjoy any of the supposed benefits of group work in this instance, since opportunities to participate in this or any way are denied her.

The great difference in the cultural backgrounds of the two women on whom this study focuses seems to have had a significant effect on their interactional styles. In fact, their styles seem to be polar opposites. L1, from Mexico, is often an unofficial group leader. On a written evaluation of the advertising unit, she provided the following unsolicited comment:

> I feel that sometimes the group is expecting me to lead them. Even though I purposely have stay (sic) quiet they wait until I start or they ask me. What can I do about this? I feel like the hen leading the chickens.
>
> If I don't participate then I could pay the consecuences (sic) and if I do participate then I feel that they are not doing their jobs. (March 3, 1994)

On the other hand, L3 commented to me in a personal interview that her parents have taught her that "it was polite to be silent." Thus, it is more important to listen to the opinions of others than to contribute one's own. With these two conflicting styles, it is no wonder that the situation manifested itself as it did. Had the task been a two-way communication task, however, L3 would have had to participate for the benefit of the other group members; in this case, participating would have been the only polite thing to do. At the same time, L1 would have had to allow other learners to participate more equally in order to complete the task.

In the first excerpt, the Korean group members are sharing their answers to several questions about advertising which they have just had time to review individually. A summarized version of the information discussed is to be presented by one or more members of the group using an overhead projector and a plastic slide. Each group is free to select its own presenter as well as the 'secretary', who will write the group's outline on the slide.

Though this task, as one involving opinion-sharing and not an information gap, does not *require* that all students participate, L6 does attempt to allow all members to participate. In line 5 of Excerpt 1, L6 nominates the topic (answering question number one) and suggests that L3 read her answer to the question. L3 responds with a query about exactly what type of answer is expected. In line 10, L6 answers L3's question and provides encouragement for her to continue, which she does at lines 12 and 14. Line 13 is a clarification request by L6, while lines 15-16 include repetition, evaluation, and turn allocation (presumably to L7, since he seems to be the group member answering in line 19). L7 answers in Korean; the fact that L8 says in line 29, "I agree with him," proves that L7 did indeed answer the question, because there is no other "him" to whom L8 could be referring (as he is answering L6, the third male, directly). Only after all of the group members have provided their answers—whether in Korean or English—does L6 provide his own opinion (lines 34-37), and then move on to the next question (line 37). This is typical of his inclusive management style, and fits in with L3's culturally-bound expectations of how people ought to interact: listening to others before (or instead of) providing their own opinion.

Excerpt 1

1	L3	discussion (6) discussion
2		((laughter))
3	L8	ok
4		(6)
5	L6	**who's gonna start first (2) what about what about the number one**
6		**what is your idea of the definition of advertising (2) why don't you**
7		**read your ((unintelligible)) first one** *(topic nomination, turn*
8		*allocation)*
9	L3	(it's just a definition right?)
10	L6	**yes that's ok** *(evaluation)*
11		(4)
12	L3	I think advertising is an action of announcing the sale of something
13	L6	**what what sale sale of what** *(clarification)*
14	L3	something
15	L6	**ah sale of something** *(repetition)* **ok** *(evaluation)* **(3) how about yours** *(turn*
16		*allocation)*
17	?	(only?)
18	L6	**hm** *(encouraging)*
19	L7?	((KOREAN))
20	L3	definition ((KOREAN))
21	?	((KOREAN))
22	L3	((KOREAN))
23	L8	you can recorded your Korean can be recorded
24	L3	((laughter))
25	L7?	oh
26		(8)

27 L3 ((KOREAN))
28 L6 **what is your idea** *(turn allocation)*
29 L8 so I think uh the yes I agree with him I I I don't think it's just confined to
30 to the some products you can we can adver-advertise some some politicians
31 and some some policy or some some some social problems (2) so I think
32 that the basic idea of the advertisement is to make (known?) just yeah
33 L6 uh: let me read my: definition about °advertising advertising is transferring
34 information about something to a person to the persons who are the
35 probable consumer and maybe this can contain the product and
36 ((unintelligible)) what is second...

In the second excerpt, from the second day of taping, the group has been summarizing the main points made in the presentations. The students expect to get together with members of other groups to compare notes; however, they have all heard the same presentations. As I have mentioned, L1 has assumed the role of leader. Cases where she engages in Long and Porter's "teacher" functions have been highlighted and labeled.

Excerpt 2

1 L1 we could just mention that as other countries-
2 L2 yeah
3 L1 **they have regulations (5) there are legal regulations of ad:vertising**
4 **((writing; to herself))** *(suggesting)*
5 L3 //((unintelligible))//
6 L1 //**ok the disadvantages?**// *(topic nomination)*
7 L3 oh
8 L1 **yeah?** *(turn allocation)*
9 L3 I think in the US the advertise is more sexual and violence
10 L1 **that's the *disadvantages*** *(qualifying)*
11 L4 (Taiwanese male): sexual
12 L3 violence and
13 L4 //((unintelligible))//
14 L1 //**right** (evaluating) **that's a disadvantage// that's a disadvan[ch] vantage**
15 **right now** *(focusing)* **we're talking//about the advantages//**
16 *(clarifying)*
17 L3 //oh this is advantage//
18 L1 yeah
19 L2 (Turkish male): violence?
20 L1 **but yeah that's a good point** *(evaluating)* **it *is* a disadvantage**
21 L2 violence in advertisements
22 L4 yeah
23 L1 violence: and
24 L3 ((unintelligible)) action
25 L1 sex are more present
...

In lines 8 and 10, L3 attempts to participate by commenting on what she perceives to be a disadvantage of advertising in the United States: the presence of sex and violence. It

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appears as though L1 is inviting others to do just that in line 7, a topic nomination turn. However, in line 11, L1 qualifies L3's answer, nullifying the topic nomination turn. Apparently, L1 misspoke. In personal communication, L3 told me that she believed the conversation to have been about both advantages and disadvantages and initially had felt justified in making the statement in line 10. However, when L1 corrected her, L3 questioned her own grasp of the flow of conversation, claiming to have difficulty understanding her non-Asian classmates. Because L1 effectively controlled the conversation—using her teacher-like talk to do so—L3 was able to do nothing but back down. Since L3's input was not required for task completion, this option was open to her.

In Excerpt 3, which immediately follows the second chronologically, L2 asks L3 directly to give an example of violence in advertisements (lines 27-29). After L3 makes an attempt to answer in lines 30 and 32, L1 interrupts with a lengthy example of her own at lines 33-39.

Excerpt 3

...

27 L2 actually I didn't see a lot of in advertisements can you can you give an
28 example because I didn't remember an advertisement include covering violence
29 L3 ah because ah some kind of video game of advertise-
30 L2 ah but you know there are-
31 L3 ((unintelligible))-
32 L1 well I'll tell you another advertisement that includes violence they do advertise
33 by using violence a little bit an example of violence when you're watching
34 things concerning kids your kids how to control yourself so when they show
35 the mother screaming at the kid and then they said stop that's they are trying
36 to advertise you to sell the idea for you to control yourself but they do show
37 a little vio vio violence before the mother hits the the kid you know
38 L2 I see what you mean but I think eh
39 L1 it is a constructual it is an educational
40 L2 yeah-
41 L1 violence but still it is used and in a certain way she could consider that
42 maybe sometimes they are advertising something by being too pushy in
43 selling it to you I don't know if °I'm
44 L2 yeah I see I got what you mean but
45 L1 I don't know if that helps ((unintelligible))

L3 does not speak again for 64 turns (at line 124), at what turns out to be the end of the time allotted for this task. When L3 attempts to disagree with a particular point, her shy and quiet manner, combined with the insecurity she expressed to me, makes this somewhat difficult. The fact that she is challenged by all of the participating members (L1 at lines 125, 127, and 130; L2 at line 129; and L4 at line 135) further exacerbates L3's problem.

Excerpt 4

...

111 L1 do you think that it's a it's a it's an an advantage not to have public
112 competition is that an advantage for your //country// you think
113 L2 //yeah//

114 L1 that they don't fight between companies to publish something is that a good
115 //thing or a disadvantage//
116 L2 //I think it's better// the American system is better I think
117 L1 ok so this that's a disadvantage from other countries
118 L2 yeah
119 L1 not to have competition not having public competition (1) between
120 companies ((reading aloud as she's writing)) ok because if you have
121 competition and they try to get better each other instead of
122 L2 yeah sure
123 L1 ok um anybody
124 L3 I don't (dis?)agree
125 L1 you you don't agree?
126 L3 I don't agree
127 L1 you don't think it's good?
128 L3 yeah
129 L2 why?
130 L1 why?
131 L4 public competition
132 L2 public public competition
133 L4 (public competition?)
134 L3 competition information
135 L4 what do you mean?
...

In line 135, L4 asks L3 to explain her answer, but L2 takes over the turn and defines the term for L3 in line 136. L3 attempts again to express her own opinion in line 138 (also showing that L2's attempt to provide L3's opinion for her has failed), and is immediately challenged by L1 in line 139. That this turn is indeed a challenge and not simply a request for information is borne out by the fact that L1 dismisses L3's point in lines 145-147, soliciting information on "what else is important" from the group.

Excerpt 5

...
135 L4 what do you mean?
136 L2 you know this is better than this is
137 L4 oh ok
138 L3 A better than B (+) that's not the point I think
139 L1 ok why?
140 L3 oh I think advertisers ((coughs)) have to say tell quality and tell good points
141 ((teacher is addressing the whole class; unintelligible)) almost this
142 competition is strong I think
143 L1 ok
144 L3 in US (2) if A says our //(unintelligible)//
145 L1 //ok we disagree// on this one we don't know if it's
146 an advantage or disadvantage but that's it ok good point what else do you
147 think is important information as a main point...

L1 has evaluated the contribution made by L3 and determined it to be unimportant. Certainly this could happen in any type of task if one group member assumes control of all interaction, as L1 has done. The negative affective climate created by such a relationship would no doubt linger, causing L3 to be uncharacteristically silent, possibly in other groups but certainly in any group in which L1 was a member. Therefore, it is advisable for a language teacher wishing to allow each student to participate more or less equally—and to his or her fullest potential—to consider both task type and group makeup. When evidence such as the above is found, even a teacher who prefers the students to choose their own groups may wish to reconsider in that regard.

CONCLUSION

It seems clear from the data presented that turns were not distributed evenly in L1's group. The atmosphere of the group created a situation in which one learner, L3, was unable to participate to her full satisfaction and potential. For this learner, group work did not provide any additional opportunities for communication and practice. In fact, L3's negative experiences in group work may have actually increased her anxiety. As I have argued, a two-way communication task could have prevented the disparity in turns among group members by requiring that all group members participate more or less equally in order to complete the assignment. Thus, appropriate task design is essential for a teacher who wishes group work to provide an improvement over lockstep work in terms of language acquisition opportunities. As importantly, if a teacher has access (through recording) and pays attention to the signs that one or more students are uncomfortable and unable to participate because of the style of a certain group member or members, then that teacher can prevent those students from working together in the future. In this way, some large problems concerning group work can be avoided, so the teacher will be free to tackle the next problem.

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NOTES

[1] The questions discussed by the students included the following:

1) What is your definition of advertising? What is its purpose? Where does it appear? Who benefits from it?

2) List the ways in which it benefits/harms consumers and give reasons why.

3) How does advertising in the US differ from that in your home country?

4) Is advertising regulated in your home country? How?

5) As far as you can tell from your experience, is advertising regulated in the US? How?

6) Should advertising be regulated? Why or why not? Are there special categories of advertising which should or shouldn't be regulated? Why or why not?

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DON'T JUDGE A BOOK BY ITS COVER:

A TEACHER'S PERCEPTIONS AND MISPERCEPTIONS

Jennifer Lai

Although teachers like to think they are fair and unbiased in the classroom, the cultural background of a teacher influences perceptions of students. In this paper, I examine my perceptions of a Korean female student who appears at first to be uncommunicative and shy. After careful discourse analysis, however, she turns out to be quite different from my first impressions. An ethnographic approach to action research is used in this study.

INTRODUCTION

Teacher perceptions of students play a pivotal role in the classroom. For better or for worse, these perceptions influence what the teacher thinks of students, how the teacher behaves towards students, and, eventually, how the teacher grades students. In teaching English as a second language, it is particularly important for teachers to be aware of their attitudes toward different cultures since their students often come from various backgrounds. However, more than awareness, teachers also need to work to develop an unbiased sensitivity to students' cultures. The term "unbiased" is key because not all students from the same culture behave in the same way, and to expect students to behave in ways typical of their cultures can be dangerous as well. In this paper, I examine how my perceptions of one student (L15) were misleading. I first describe the procedure I followed in implementing this research. I then discuss the issue of culture. This discussion is followed by my original hypothesis about L15's behavior, an explanation of the recorded data, and an analysis of transcripts. Finally, I discuss the insights I gained into my own teaching as a result of this research project.

PROCEDURE

To gather the data for this study, I used one video recorder and thirteen audio cassette recorders. Two two-hour sessions were recorded: one on March 1, 1994, the other on March 3, 1994. The classroom used for recording was not the usual classroom meeting place. Students were allowed to sit wherever they were comfortable; however, groups were asked to move when there was overlap in sound. After each taping, I went back to the office to record my impressions in a teacher journal. A few days later, I listened to the videotapes and again recorded my impressions from the tapes. Finally, I transcribed the relevant audiotapes. This process lasted an entire semester. The final source of data for this action research is L15's journals and essays which she kindly gave me permission to use for this research.

CLASSROOM CULTURE

The Role of the Ethnographic Approach

The ethnographic approach is very useful in gaining insight into classroom culture. According to Allwright and Bailey (1991), ethnography has been "used predominantly by anthropologists who attempt to document and understand the behaviour of people in cultures" (p. 5). Today, according to Allwright and Bailey (1991), "ethnography has gained considerable support as an approach to classroom research in education in general (Wilson, 1977; Erickson, 1981; Green & Wallat, 1981), as well as in studies of language teaching and learning" (p. 5). In my research for this paper, I have chosen to use the ethnographic approach since culture plays such an important role in shaping teacher and student perceptions.

One of the ethnographic tools I use in my research is triangulation. Allwright and Bailey (1991) state:

> As language classroom research procedures have become more sophisticated, we have come to recognise the value of multiple perspectives in data collection and analysis. . . . An important methodological concept here is that of 'triangulation'. Anthropologists have borrowed this term from land surveying to suggest that at least two perspectives are necessary if an accurate picture of a particular phenomenon is to be obtained (p. 73).

In order to gain a more balanced view of L15, I use several sources of data: student self-reports, student written assignments, teacher self-reports, and transcripts from audiotapes.

Another ethnographic concept which influenced this research is "an attempt to make the world investigable in the participants' own terms" (Markee, 1994). Since this research involves cultural perceptions, and since cultural perceptions depend upon the subjects' thoughts and feelings, it would make sense to try to understand those cultural perceptions as the participants see them. Through the use of teacher and student self-reports, I try to gain a better understanding of the cultural forces at play in the classroom context.

One problem with self-reports, however, is that they can be very misleading. In this study, if I had relied solely on teacher and student self-reports I would have believed that L15 was not participating in class. The data from the transcriptions, however, prove that L15 does participate—hence the value of triangulation. Although I do not discount the self-reports entirely, the audio taped data is more believable because it shows L15's actual behavior in class.

Literature Review

In a review of how cross-cultural issues may affect ESL classrooms, McGroarty (1993) states that "learners and teachers alike bring years of life experience and cultural knowledge to the instructional setting" (p. 3). Students might come into the classroom expecting a teacher-centered approach. Teachers from the United States might come into the classroom expecting the students to be "self-reliant, at ease in expressing and defending personal opinions, and interested in personal advancement" (McGroarty, 1993, p. 3). However, student cultural expectations regarding gender, course content, and social etiquette can negate the teacher's expectations. McGroarty concludes that cross-cultural training is necessary, but because of the diversity of situations teachers encounter, such cross-cultural training should be specific to the particular situation (p. 4).

Similarly, Buchanan (1990) stresses that teachers should be aware of the "cultural assumptions" (p. 73) which teachers and students hold. By addressing culture directly in class, student anxiety over the new culture can be eased, and teachers become more aware of their students' needs. Buchanan continues with some cultural values which American teachers might hold, focusing on such values as "competition, confrontation, cooperation" (pp. 77-8). She also discusses what is considered "valued behavior in the ESL classroom: independence and individual work, turn-taking, group work, deadlines, asking questions" (pp. 79-82). Finally, Buchanan notes that an "interest in the new culture," "risk-taking," and "positive attitudes towards the self as a language learner" are all equated with the characteristics of a good learner (pp. 84-5).

A Discussion of Culture

According to Clifford (1988) "A 'culture' is, concretely, an open-ended, creative dialogue of subcultures, of insiders and outsiders, of diverse factions. A 'language' is the interplay and struggle of regional dialects, professional jargons, generic commonplaces, the speech of different age groups, individuals, and so forth" (p. 46). In this research, I study only two strands in the web of culture: everyday culture and classroom culture. Everyday culture is the kind of culture one encounters in one's daily life. Everyday culture includes greetings, family structure, attitudes towards gender, everyday manners, etc. Classroom culture consists of the behaviors and attitudes normally accepted in the classroom. This can include teacher-fronted vs. student-fronted classrooms, attitudes about student participation, attitudes about how teachers or students should behave, etc. In no way are classroom culture and everyday culture totally separable. Once students and teachers enter the classroom, these two strands of culture intertwine.

This "interplay" of cultures mentioned by Clifford also manifested itself in my research. There was a confluence of L15's everyday culture and my everyday cultures, my classroom culture and L15's classroom culture. It's hard to tell where one began and the other ended. Moreover, as we will now see, all of this intermingling colored my perceptions and L15's perceptions of L15 as a learner.

Everyday culture: Teacher perceptions. My cultural perceptions are a mixture of American and Chinese philosophies. I am used to living in two worlds. At home, my parents raised me in a Chinese-American fashion. At home I listened to my parents speak in Taiwanese as I responded in English. My mother taught me how to behave properly in both American and Chinese cultures. At school I also lived in a strange mixture of American and Chinese cultures. Although I adapted quite well to the American school system itself, I was often teased and threatened on the playground because I was Chinese. As a result, I spent the greater part of my pre-college years trying to become as American as possible.

It wasn't until college that I became interested in the Chinese side of me. I started seriously studying Mandarin Chinese for the first time. After graduation, I taught English in China for a year and discovered that I was more Chinese than I had thought. By the time I left China, I no longer had any real identity conflict. I was both Chinese and American, and I accepted the fact.

I am not sure how much of my everyday culture influenced my perceptions of L15, but I am sure something must did. I viewed L15 as being somewhat shy. Perhaps I had this impression merely because she was quiet. More likely, however, this impression resulted from my experiences with Asian women who were quiet and shy. I am never quite sure if I see something the way I do because it is the Chinese half or the American half of me speaking. So my perceptions of L15 in terms of everyday culture are difficult to sift through.

Classroom culture: Teacher perceptions/expectations. Some of my perceptions about Korean culture came from a composition class I taught the previous semester. In this class, approximately half of my students were Korean males. This was the first time I had any significant contact with Koreans. The men tended to be very bold in class. They participated actively in group work and in teacher-fronted class discussions. They worked hard and openly told me what they didn't like about the class. However, when I met the wives of some of my students, they seemed to be very soft-spoken, shy and polite. Based on my few encounters with Korean women, I assumed that they would be very diligent in their homework but somewhat less participatory in classroom discussions.

My perceptions of Korean students were also influenced by my experiences with Chinese students. I taught in China for one year at a medical college. My students were all young female nurses. While in China, I had a very difficult time getting my students to talk. They wanted audiolingual drills, and they wanted to listen to me talk. I left China with the idea that Chinese students, particularly Chinese female students, simply did not talk very much in class. Also, I knew from talking to my students in China that they were usually not allowed to speak in class. The teacher was considered the sole repository of all knowledge, and it was the job of the student to memorize and absorb the teacher's knowledge. These perceptions probably further affirmed my assumption that other Asian women, and in this case the Korean female student in my class, would be the same way.

As an American teacher, however, I had several expectations of my students. I expected them to "express and defend personal opinions" (McGroarty, 1993, p. 3). I expected them to take turns, participate in group work, and ask questions (Buchanan, 1990, pp. 79-81). Most notably, I've discovered through doing this research that I expected students to do all of the above (except group work) at a public level. By public level, I mean teacher-led or classroom-level discussion. In regard to turn-taking at the public level, Buchanan (1990) notes:

> Certain students will not participate unless called on directly. These students will not necessarily raise their hands when they have an answer they want to contribute . . . It has often been noticed that people from Japan and Korea do not volunteer answers (p. 80).

I especially noticed this about L15. She very rarely volunteered information at a public level. It was this mistaken over-reliance on public level discourse in my evaluation of participation which led me to believe that L15 did not participate in class at all.

Also, because of L15's "minimal" participation and the brevity of her written assignments, I was under the impression that she was a sweet, quiet, but low-level learner. In the first few items L15 wrote, her grammar was less-than-perfect, and in the first draft of her first paper she wrote in one-sentence paragraphs. Also, she indicated in a survey I gave the first day of class that she didn't enjoy writing very much.

Classroom culture: Student perceptions/expectations. I first discovered L15's perceptions of learning from the Student Information Sheet, a survey I gave to the class on the first day of the semester. In this survey, L15 expresses her feelings about writing: "I'd like to write a short sentence in English but I can't write long sentence and I don't want it." This bit of information proved true in the first paper L15 wrote which consisted of one-sentence paragraphs.

In response to the question "How do you feel about speaking in English?" she wrote, "There's a little difficulty in that point." I am not sure if L15 knew the difference in meaning between "There's a little difficulty" and "There's little difficulty" so I could not tell whether L15 did or did not have difficulties in speaking.

Under the "Any other comments or suggestions" section L15 wrote, "If I will write about something, its topic is concerned about my interest." So, it seemed that L15 has some very clear ideas about the content she would like to cover in this class. L15's "topics of interest" theme came up several times throughout the semester.

In L15's first journal entry she wrote:

> At the beginning of the class, I thought this class would be very interesting because there are very different foreign students in class. But my thinking has changed. I'm so shy that to talk with different person every class make me to be afraid. They have very different characters and their particular pronunciations and I have to try understand all of them. Someone's attitude make me depressed though he didn't do on purpose.

Further on in this journal entry, she also mentions that it is very difficult for her to form opinions because she rarely does so in her math classes or in her country. However, she mentions that she hopes to be able to form opinions "without scare and without exaggeration." From this journal entry it appears that L15 does view herself as being shy and as having difficulties in giving opinions. However, she does indicate that she is willing to make an effort to participate despite her difficulties.

After the second day of taping, I had the students write a journal entry about that particular class. I was especially interested in L15's comments about the class since she had asked a question which initiated a 45-minute nonstop conversation—a question which actually led me to abandon my lesson plan for that day. L15 wrote:

> I know that this is not conversation class. But we talk about something then we want to think and want to write furthermore. I need to find something which I really want to write about. The material is not given from the article which we have no concern about but from our experience or something that we have known well about.

L15 makes her point again that she wants to discuss topics of interest to herself.

L15 also writes in the same journal entry, "But someone wanted talk a lot alone, so someone had little opportunity to express his opinion. Generally I liked that time." I believe that L15 was referring to herself. During the discussion, L15 really had difficulty getting a word in edgewise once her thought-provoking question was asked. It was not until I called on her towards the end of the discussion that she had the floor at the public level.

From the self-reports, it seems that L15 had some reservations about writing and participating (orally) at the beginning of the semester. It also seems that she held tenaciously to the idea that topics for discussion and writing should be topics in which she had a personal interest. In addition, she indicates several times that she would have liked to participate if she had had the opportunity.

ORIGINAL HYPOTHESIS

By examining teacher and student self-reports, I engaged in the first leg of the triangulation process to determine perceptions. From these accounts, I gathered the impression that L15 was a sweet, quiet, shy, low-level learner. I was also under the impression that she didn't enjoy group work, had trouble voicing her opinion, and didn't participate in public-level classroom discussions. In fact, I believed at the time that L15, despite what she said to the contrary, did not really want to participate. This latter perception further shows the importance of triangulating, of using as many sources of data as possible to assure accuracy.

EXPLANATION OF THE CLASSES

On both days of taping (3/1/94 and 3/3/94), students were working on a unit called The Iceman, a unit developed by David Broersma for a graduate-level ESL writing course at the University of Illinois at Urbana-Champaign. The Iceman is a 5,300-year-old man found in the Italian Alps (Fritz, 1993, p. 46). The other reading materials in the Iceman unit include articles about various preserved dead bodies. The rhetorical focus of the unit is the cause-and-effect essay. On both days, I had the day's agenda written on a transparency and projected onto the screen via overhead projector.

Day 1 of Taping (March 1, 1994):

At the beginning of class, I gave announcements. During this time, L15 asked a question of L9, a Mexican student. Then students answered questions about the Iceman video they watched during the previous class period. Students were divided into three groups.

Group leaders were chosen by the group members. Most of the groups were formed as a result of who was sitting next to whom. Also, I handed out transparencies which listed the questions each group was to answer. L15 was in Group 2 which consisted of L9 (a Mexican female) and L6 (a Taiwanese male). After students finished the group work, group leaders presented their group's findings. This section was somewhat teacher-led because I would ask the rest of the class for "other questions" or "more answers" after each group leader presented. L9 was the group leader for L15's group and did the presenting. Then students chose which topic they wanted to read about further. On this basis, they regrouped themselves. They had a choice of reading about the Iceman, the Bog People, or the Egyptian mummies. L15 chose to read about the mummies. She was in Group 1 which consisted of L2, a Taiwanese female, and L4, a Jordanian male. Finally, students prepared presentations with students who read the same articles. During this time, L15 worked with L2 (since they read the same article), and L4 worked alone (since he read a different article). Students did not finish the group work so it continued into the next class session.

Day 2 of Taping (March 3, 1994):

On Day 2 of taping, only the first three items on my agenda for the day were ever addressed. The topic was on writing abstracts that day, but because of an intriguing question from L15, it took us another three weeks to get back to abstracts. First of all, the students took up where they left off at the end of Day 1 of taping. L15 and L2 continued to work on the article they read on King Tutankhamun. L4 continued to work on the article he read on a recently found mummy. Then the class came together for presentations. During this discussion, L15 asked her first noticeable question at the public level. When the Bog People group presented, L15 asked L5 a question. However, when it was time for L15's group to present, the other two members of her group did all the presenting. L15 again refused to speak at the public level.

Toward the end of the class presentation, a spontaneous discussion ensued as the result of a question that L15 asked. This was the second noticeable question she had asked that day. Perhaps these were not the only questions she had ever asked up until this point. But as a culturally blind American teacher, I had never noticed her "participating" until these two points. These two questions dramatically changed my perceptions of L15 and my perceptions of my teaching.

ANALYSIS OF TRANSCRIPTS

Before I analyzed of the transcripts, I had the impression that L15 was a shy, low-level learner who did not participate much during class. The transcripts, however, prove otherwise. The following points identify the kind and extent of L15's interaction. (An explanation of the transcription symbols is in Appendix A.)

1. Taking a Fair Share of Turns

When I calculated the percentage of turns L15 contributed, I discovered that she took her fair share of the turns. On 3/1/94 she produced 24% of the turns occurring among the three people in her group. On 3/3/94 she produced 32.6% of the turns generated by the three people in the group (although most of the time she is doing pair work with L2). Nevertheless, in terms of the distribution of turns, L15 made an appropriate contribution to the interaction.

2. Providing Feedback Utterances

I divided L15's feedback into two main categories: backchanneling and repetition utterances. Backchannels consist of words such as "yeah, uhuh, so, okay." Repetitions consist of echoes of the other speaker's utterances. I divided the repetition into those with falling intonation and those with rising intonation. I further divided the repetitions with rising and falling intonation into those which were answered by her classmates, and those which were left unanswered. The charts below display the number of turns of each kind that occurred on the two days of taping.

L15's Feedback on 3/1/94:

Backchannel	Repetition			
	Rising Intonation		Falling Intonation	
	Answered	Unanswered	Answered	Unanswered
73	9	0	1	9

L15's Feedback on 3/3/94:

Backchannel	Repetition			
	Rising Intonation		Falling Intonation	
	Answered	Unanswered	Answered	Unanswered
42	3	1	2	0

In sum, 62% of L15's turns on 3/1/94 (91 out of 147) and 40% of L15's turns on 3/3/94 (48 out of 120) involved feedback utterances—a significant proportion of L15's overall contributions. These feedback utterances are important because they indicate that L15 is participating in the conversation.

More importantly, a significant number of L15's turns are backchannels: 50% of her turns on 3/1/94 and 35% of her turns on 3/3/94. Backchannels are vital to keep a conversation moving. The fact that L15 uses these backchannels is important because it shows that she (a) knows the proper backchannels in English and (b) is making an effort (consciously or unconsciously) to contribute to the continuation of the conversation.

Regarding the repetitions, the data is not large enough to draw any conclusions. On 3/1/94, L15's repetitions with rising intonation tend to get answered more than her repetitions with falling intonation. However, on 3/3/94, there is not much difference between the rising and falling intonation. The only observation that can be made is that L15 does repeat what her classmates say.

Excerpt 1 includes typical backchannels and repetitions that L15 uses in her conversations. Lines that relevant to the discussion here are marked with an asterisk. In line 7, L15 uses "yeah" simply to keep the conversation going. In line 9, she uses "but yeah" perhaps to introduce her contradicting point. It seems that the "but" introduces an opposing idea, but the "yeah" affirms what L2 has just mentioned. The "yeah" of the "but yeah" seems to function as a face-saving technique so that L2 will not get embarrassed or upset. In line 11, L15 repeats L2's utterance using rising intonation to affirm that she heard correctly. In lines 13 and 15, L15 again uses backchannels to maintain the conversational flow.

Excerpt 1 (3/1/94)

6	L2	Yeah, so see there were three, mummy three=
7	*L15	Yeah=
8	L2	shaped coffins, and uh they contain contain the mummy body of the king so
9	*L15	But yeah it this is two two is glided [sic: gilded] wood but ((unintelligible)).
10	L2:	This is third one.
11	*L15	This is third one? Right?
12	L2	Yeah, it is the king.
13	*L15	Yeah.
14	L2	The king. His body is put in a gold// [con-] like// [con-] coffin.
15	*L15	//Okay.// Okay.

Excerpt 2 shows another way L15 uses repetition. In lines 95 and 101, it seems that L15 uses repetition to learn the material. Perhaps she is learning vocabulary or content. Whatever the case may be, she does repeat terms under her breath.

Excerpt 2 (3/1/94)

89	L12	I have a question. Uhh, the question was "which modern scientific
90		techniques"
91	T	Right
92	L12	Not the areas of study, right?
93	T	Right. Yeah. You're right. So, (hh) umm. I accepted these because they
94		broadly,
95	*L15	°scientific techniques
96	T	inside these fields, they have some techniques (hh).
97	L15	°Yeah.
98	T	But if we wanted to be very specific, we should've had a specific
99		technique listed under each here.
100	L8	X-rays and Carbon 14.
101	*L15	°x-ray

3. Providing the Correct Vocabulary Items

Another way L15 participates is by providing proper vocabulary items. Often, a fellow group member will not remember the correct term for something. In transcripts from both days, L15 comes to the rescue with the proper word. In Excerpt 3, the term L15 uses is directly from the Iceman video (line 117). Apparently, L15 was very attentive during the film because in lines 117-118 she also mentions that she heard the term during the film. L15 also provides a simplified yet understandable definition of glacier; she calls it "big ice."

Excerpt 3 (3/1/94)

106	L9	What caused the Iceman to be so remarkably well-preserved, preserved?
107	L6	The snow?
108	L9	The snow, it was frozen.
109	L6	Snow, yeah. Snow, also they talk about the the rock, the shape
110	L15	[With, with] location of the body
111	L6	Yeah, location. So it's by the mountain shape to prep
112	L9	It was
113	L6	Very deep. The shape was very deep so the s also the snow is the layer,
114	L15	Yeah
115	L6	in layer. The snow is difficult melt very quickly so how can I say, it's the
116	L9	Uhh
117	*L15	Glacier? You mean snow is glacier. Glacier means uhh ice, big ice. I
118		heard that. Yeah.
119	L6	It shape like this. The main hill.
120	L9	Yeah
121	L15	Yeah

4. Being Assertive

Another preconception I had was that L15 was rather timid; but when I saw this transcript I realized that L15 was quite bold. In Excerpt 4, L4 tries to get L15 to read two articles while he and L2 would read one. L4 has a difficult time explaining what he means, but in line 57 this becomes apparent. The "she" in line 57 refers to me (the teacher). I had just explained to the group that since they only had two articles to read, two people would read one article, and one person would read the other. I believe that L4 was confused about the directions. Nevertheless, he tries to give L15 the extra work of reading two articles.

L15 proves to be quite capable of defending herself. In line 68 she tells her group mates which article she wants to read. The outcome is positive for L15—she reads the article on King Tut with L2. L4 reads the other article by himself.

Excerpt 4 (3/3/94)

48	L4	We read this one and she will read.
49	L2	Yeah, I'm going to read this.
50	L4	No, this is one article both.
51	L2	Oh.
52	L4	No, I I mean both. One other person should read both this. What you
53		read?
54	L2	°So you got to choose another one.
55	L15	Yeah, okay. Right. I was wrong.
56	L2	(hh).
57	*L4	No, she said, two of us will read this and one will read both, two others.

58 L2 You mean I just need to choose one.
59 L15 °I want.
60 L4 Yeah. These two are the same articles. So one will read one thing, right?
61 And the other two will read this one because this very (big).
62 ((unintelligible)).
63 L2 So?
64 L4 So, let me. We should read this, and she will read all you. I mean, two
65 person will read these?
66 L2 Yeah?
67 L4 One person will read (+) these two.
68 *L15 Okay, two person. I want to read one.
69 L2 Okay you want to read this. So. ((unintelligible)).
70 L4 I'll read this.
71 L2/4 (hhh).

5. Keeping classmates on task.

Another proof of L15's participation is that she keeps her group mates on task. In Excerpt 5, L15 reminds L2 of their assignment (lines 17-18, 20-21, 23). The following dialogue shows that L15 must have been paying attention the previous class because my only directions for this task read: "work on presentations."

Excerpt 5 (3/3/94)

17 *L15 And how about cause and effect? We have to write the cause and effect.
18 Remember?
19 L2 Yeah.
20 *L15 We have to write the point and we have to write cause and effect and: the
21 other is interesting point. This is just summary, right?
22 L2 Mm hmm.
23 *L15 Yeah. You have to answer the other two kind of things. ((rustling of
24 papers)).

6. Defending a Classmate from the Probing of Another Classmate

Excerpt 6 takes place immediately after the above dialogue. Perhaps L4 is irritated by L2's joking around in line 25. Perhaps he was merely being curious. Whatever the case, he is really giving L2 a hard time. In lines 34, 36, and 38, he asks if L2 read her article at home. I never assigned the articles to be read at home so this was an invention entirely on the part of L4. Also, in the previous class, I have no recording of L4, L2, and L15 agreeing to read the articles at home. In line 39, L15 defends L2 and says that L2 did read the articles at home and that L2 took notes as well. L4 then asks L15 if she did the reading (line 40). L15 comments in line 41 that she did the reading before class. L4 comes out the loser here. He admits at the end that he didn't do the reading at home (line 42). This excerpt also shows that L15 is not as shy as I thought she was. She is able to turn the tables on L4—not a mean feat when done in a second language.

Excerpt 6 (3/1/94)

25 L4 What you wrote?
26 *L2 Get out. (hhh).
27 L4 What?
28 L2 I'm sorry. (hhh). No. Oh.
29 L4 Oh, sorry.
30 L2 Umm. Right now I just. Okay. This is what I'm going to write for what
31 I read last day
32 L4 Yeah.
33 L2 and=
34 *L4 You didn't read it at home?
35 L2 Hmm?
36 *L4 You didn't read it at home?
37 L2 What?
38 *L4 Did you read it at home?
39 *L15 Yeah yeah she read at home and write something.
40 *L4 And you?
41 *L15 Oh, but yeah. I read before the class so I don't need to.
42 *L4 I forget to read at home, so. I'm sorry.
43 L15 (hhh). No problem.

7. Contributing Content

Yet more proof that L15 participates is that she contributes a lot in terms of content when she is given the chance. On 3/1/94 she made several contributions but they didn't appear on the group's transparency. L9 seemed to act as gatekeeper that day and all of L15's comments were lost. However, when she works with an appreciative and cooperative partner on 3/3/94, L15 makes most of the contributions. On 3/3/94, L15 makes 6 out of the 8 points recorded onto the transparency. This means that L15 did 75% of the work. In Excerpt 7, notice how accommodating L2 is in lines 1, 4, and 8. L2 seems to be continually checking with L15 to make sure that L15's ideas are represented accurately. The ideas which are mentioned in lines 1-2, 13-14, and 16-17 are the ideas that get written on the transparency.

Excerpt 7 (3/1/94)

1 *L2 So, what I wrote were your "The structure of the tomb is very complex." And
2 "No one found out the mystery until Carter," this guy.
3 L15 Okay.
4 *L2 Anything else you want the=
5 L15 Yeah. About eh ((student gestures?)) do you write it? Okay, okay.
6 L2 Yeah, yeah.
7 L15 And
8 *L2 Anything else?
9 L15 And, it's my interesting.
10 L2 Mm hmm.
11 L15 Yeah.
12 L2 What is it?

13 *L15 My mystery of the death founder. Man found the tomb. Three mans died
14 after found the tomb, right?
15 L2 Yeah, and?
16 *L15 So, I think (you) said before was King Tut's curse. After found the tombs?
17 Uh, yeah.

8. Asking Questions During Group Work

Another way that L15 participates is by asking about things that interest her. She seems intent on keeping the discussion relevant and personal. How much she espoused this philosophy was not obvious until I listened and studied the transcriptions of these tapes. Her questions are fascinating because they are truly communicative and require creative thought. In Excerpt 8, L15 asks L9 what she thought of the "snowman's TV" in line 367, referring to the Iceman video which they watched in the previous class. L15 acts almost like an interviewer in line 374 when she asks L9 for further elaboration of her response. It seems, however, that L15 asked this question as a set up for the comment that she makes in line 382. The provocative nature of her comment in lines 382-385 shows that she is not only participating, but she is thinking at much higher levels than the assignment calls for. This contradicts my preconception that L15 was a low-level learner.

Excerpt 8 (3/1/94)

367 *L15 (hh). You're feeling about the snowman's TV?
368 *L9 Hmm?
369 *L15 You're feeling, not exact. What about your thinking about the snowman's
370 video?
371 L9 The snowman? Oh. I really like it.
372 L15 Why.
373 L9 I think it's very interesting.
374 *L15 What point.
375 *L9 Hmm?
376 *L15 What point is interesting.
377 L9: What point. It was very well-preserved. I think it's very very interesting.
378 And the kind of uhh findings you can do with with the mummy.
379 L15 Yeah.
380 L9 You can guess eh how people live at that time. What kind of activities they
381 uh did. And what kind of life. Many things, many things.
382 *L15 But I think it makes it makes very confused with us 'cause we have to
383 change the history 'cause. Do you know that? He he lived maybe bronze
384 ax? He uses bronze axes but he lived in B.C. 3300 years but history didn't
385 believe it.
386 L9 I think probably history was wrong (hh).
387 L15 Yeah, but we have to //yeah study about//
388 L9 //Because this is the proof that// it was some copper because the axe eh was
389 made of copper not bronze. Do you know that?
390 L15 Yeah, yeah, yeah, yeah, right, right, right?=
391 L9 So, I think that this proves history was wrong about the stages?

By asking her original question in line 367, L15 has a chance to negotiate meaning. In line 368, L9 doesn't understand L15's question; L15 re-explains her question by adding more information and rephrasing the question (lines 369-370). In line 375, L9 doesn't understand L15's probe; L15 re-explains the meaning to her by adding more information (line 376). This adding of information and rephrasing of questions show that L15 is aware of what repair strategies she must use to get her message across.

9. Asking Questions at a Public Level

On 3/3/94 I noticed L15 asking questions at the public level for the first time. The fact that she was asking these questions shows that L15 does participate and that she is really thinking about the material. The first question L15 asks is during Group 3's presentation of the Bog People in Excerpt 9. She first attempts to ask her question in lines 71 and 73, but she has to repeat it before L5 hears her in line 74. L8 acts as L15's bullhorn in lines 75 and 78 and rouses L5 to answer L15's question. L15 asks her question in lines 83-4, but L5 never really understands L15's question (line 85), nor does the rest of the class. Nevertheless, her question is provocative and evokes a discussion that takes up five pages of transcription. Also, because L5 and the rest of the class don't understand L15's question, this allows for negotiation of meaning to take place (lines 85 following).

Excerpt 9 (3/3/94)

71 *L15 °I have a question (hh).
72 All ((applause))
73 *L15 I have question. (hh)
74 *L5 Ye::s
75 *L8 Yeah, she has a question. (hhhhh)
76 L5 Oh!
77 All (hhh)
78 *L8 You have to answer this question.
79 L5 Oo::h. //I'm sorry.//
80 L15 No problem.
81 L8 //On paragraph second, third//
82 L5 Oh, okay
83 *L15 Do you think we can make uhh we can make like this the body in in this
84 time than more preserved than that time? Do you think so?
85 *L5 I don't get your question. I mean. You mean uhh.
86 L15 We make, yeah, today we make uhh
87 L Preserve
88 L5 Preserve
89 L15 Yeah, preserve like this
90 L5 Uh huh
91 L15 Then we can make uh more
92 L5 Uhh Like with ice or ss or
93 L15 No
94 L5 something like that (fizzeration)?
95 L15 Yeah, like, b you mean, bog?
96 L5 bog.

97 L15 Yeah.
98 L5 Bog is kind of uhh uhh mud mud uhh=
99 L15 Yeah=
100 L5 ground=
101 L15 then today we can make bog like that time?
102 L8 Yeah
103 L15 Can can we make bog like that time?
104 L5 Uhh should be I can't be

The next question L15 asks on 3/3/94 spurs on a 45 minute discussion. In Excerpt 10, her seemingly simple question strikes a chord with the class, and they launch a discussion that leaves L15 little chance to participate. Nevertheless, it was this question which really made me notice L15 and realize that my perceptions of her did not do her justice. In the following excerpt is L15's question. It takes her several lines (lines 109, 111, 113, 115, 117, 119) to get the question out. It took me, the teacher, several lines (lines 114, 116, 121-122) to figure out what L15 was trying to say. L8 also seems to have caught on to L15's question in line 120. L8, the minute he understands the question, prods L5 to answer first (line 125). L5 again does not understand L15's question (line 127) which brings laughter to the whole class.

Excerpt 10 (3/3/94)

108 T Any other questions or comments?
109 *L15 I wanted to know (hhh)
110 T Uh huh?
111 *L15 (hh) After death?
112 T Mm hmm
113 *L15 If if uhh death, how can we bury dead? //Uh, I mean, uh.//
114 *T //Person?// In the United States or=
115 *L15 No, no, everywhere. //((Want to)) like buried buried.//
116 *T //Oh, you want to know in everybody's country?//=
117 *L15: How to ask? (under breath). ((unintelligible)). Buried? No.
118 T Mm hmm
119 *L15 Buried or burned. =
120 *L8 What is the ceremony?
121 *T She wants to know, you want to know how each country buries their dead,
122 right?
123 L15 Yeah. Way way to buried or want to buried. How can?
124 *L5 Mmm?
125 *L8 Start. You start.
126 T Oh, you start?
127 *L5 I don't understand the question.
128 All (hhh)

It might have been difficult for L15 to ask this question, but it definitely shows that she was thinking at an advanced level. On the other hand, maybe this question was just another example of L15 asserting her desire to discuss topics of interest to herself. Whatever the case, it was this question which changed the atmosphere of the class, my perceptions of L15, and my perceptions of teaching.

TEACHING INSIGHTS

Although it is only natural for humans to ascribe characteristics to other people, I learned that we teachers should be extremely wary of our perceptions of our students. The expression "never judge a book by its cover" is particularly apt in this case. I learned that although L15 usually did not participate at the more visible public level, she did have her own ways of participating which were just as effective in terms of her development as a learner. L15 has changed one of my American expectations about classroom culture: that students need to participate at a public level in order to participate.

Another one of my expectations about classroom culture which has changed is my belief that it is important for students to stay on task. I now believe that it is more important for the communication to be authentic—even if it means going off task. When L15 went off task, it allowed genuine communication and negotiation of meaning to occur. This is much better than answering the questions listed in the coursepack and falling asleep.

On a more specific level, I learned how to be a better teacher for L15. Once I was aware of L15's ability, I was able to genuinely encourage her writing. Over the semester, her writing, in terms of quantity at least, increased. She went from one-sentence paragraphs to nine-page papers. Granted, this might not have been due to my intensified sensitivity to her work, but something changed. Perhaps the increased quantity in L15's writing resulted from the confidence she felt when her question was discussed for 45 minutes on 3/3/94.

Also, thanks to L15, I learned a lot about my class. I learned that my students were really a lot happier when they could talk about what was of interest to them; they were student-centered. This group, for some reason, did not like being told what to do. L15's question helped me to realize this. I came to believe that my pre-planned lesson could do only so much good. Genuine communication about something of interest to students is to be preferred over the artificial communication generated by the questions in our book.

Finally, because of L15's participation, the atmosphere of the class changed. After L15's two provocative questions, the students seemed more attentive, happier, and more interested in the class. As their teacher, I also became much more comfortable with my students. I started talking with them before class began, asking them how they were doing. It was more like I was coming to be with my friends than coming to teach a class.

INSTRUCTIONAL CHANGES

One of things that changed is that I have become more flexible in my teaching. When the students want to discuss a topic, I let them. If I notice that my students are falling asleep as they write, I change the activity to a discussion. I also let the pace of the class, in terms of things we "had to do" in the coursepack, slow down a bit to allow more genuine communication to take place. Because my view of classroom culture evolved to include

"NOT sticking to the plans," I have allowed, even encouraged, extemporaneous "tangents" so that students can practice more life-like conversation.

I also exploited the atmosphere of the class to do some things which the students had requested, but I was afraid to do. They had asked for grammar and idiom lessons. I was hesitant to do these activities before because I thought they would be too teacher-fronted. With the change in atmosphere, however, I was no longer concerned. My confidence was boosted as well by the 3/3/94 class. I tackled grammar and idiom activities with the mindset that if I didn't know the answer, I could always go home and look it up. The students enjoyed the activities as well because it allowed them to learn what they felt they really needed help with.

I also became bolder in the way I taught writing. I experimented more with different ways of responding to student writing. For two of the papers, I had the students come to conferences and grade the papers with me. I liked this because I could clarify what the students really meant instead of guessing. Several of the students liked this as well because, amazingly enough, it allowed them to learn more about their grammar mistakes.

RESEARCHER INSIGHTS

As a researcher, I learned that the ethnographic approach is a viable option. I used to think that research was purely number punching. Now I can add the ethnographic approach to my research techniques. However, I also realized that researchers must guard against their preconceptions, too. Perhaps a hypothesis is necessary in the beginning, but once the research begins, the researcher also has to be careful that preconceptions do not color the results. I noticed that preconceptions easily infiltrated my work. I would look at something one day, put it aside, then look at it more closely another day, and realize that I was totally wrong earlier.

I was quite pleased with what I could learn from the video and audio tapes. By studying the tapes, I discovered that my perceptions were very different from what was actually happening in class. I learned that much of the important interaction is often invisible to the teacher's eye. Students truly do work on the task (at least in my class) when the teacher is not present.

Most importantly, however, I have gained the skills to carry out ethnographic research. Although my skills are not perfect, I know generally what to do now. In the future, I can see this tool being very useful for improving my teaching and for seeing my classes as they really are.

EPILOGUE

On the last day of class, I noticed L15 displaying some of the behaviors I studied in the 3/3/94 taping. L15 was the last in line to present her final project. She requested several times not to give her presentation. I tried to encourage her to at least say one sentence about what she was doing or just to give the title. She said she was bored with the other students' presentations and didn't want to talk about her project. Understanding her perspective, I relented. Earlier in the semester, I would have considered her incommunicative and perhaps even uncooperative. Since doing this research I discovered that the opposite was actually closer to the truth.

L15 seems to have her own philosophy of how a communicative class should be run. Namely, the class should discuss topics of interest to her—not some boring topic that the teacher has thought up. She communicates in her own way, resulting in more negotiation and, therefore, more learning. A few minutes after her refusal to "participate" on the last day of class, L15 asked another of her discussion-stirring questions. She asked me what differences I found between music and teaching ESL. She mentioned that she knew I had hurt my arm from practicing viola too much and wondered what I thought about music and ESL. Surprised that she knew about my arm, I asked her how she learned about it. She said she remembered that from the first day of class. This showed again that she really was paying attention in class, has a remarkable memory, and is interested in genuine communication. As the result of her question, the class discussion splintered into about four different conversations. Everyone wanted to talk about their experiences studying music.

The most important thing I learned, however, is that we truly cannot judge a learner. We all—teachers and students—bring our cultural expectations into the classroom. However, we must realize that culture is not a monolith. Clifford (1988) mentions that "A 'culture' is, concretely, an open-ended, creative dialogue of subcultures, of insiders and outsiders, of diverse factions" (p. 46). When we view a culture as being one way, we run into barriers.

My perceptions of L15 were totally disproved. I thought she was a shy, low-level, non-participating student. I discovered quite the contrary. In her own way she has changed all of us. She changed my perceptions of her; she changed her classmates; she changed herself; and she changed my teaching, possibly for the rest of my life. And for that, I am forever indebted to L15.

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APPENDIX: TRANSCRIPTION CONVENTIONS

Transcription conventions used in this study were adapted from van Lier (1988).

T	teacher
L1, L2, etc.	identified learner
L	unidentified learner
L3?	probably learner 3 (L3)
All	several or all learners simultaneously
//yes//yah//ok//	overlapping or simultaneous listening
///huh?///oh///	responses, brief comments, etc., by two, three, or an unspecified number of learners
=	a) turn continues below, at the next identical symbol b) if inserted at the end of one speaker's turn and the beginning of the next speaker's adjacent turn, it indicates that there is no gap at all between the two turns
(+) (++) (1)	pauses; (+) = a pause of between .1 and .5 of a second; (++) = a pause of between .6 and .9 of a second; and (1) (2) (3) = pauses of one, two or three seconds respectively.
?	rising intonation, not necessarily a question
!	strong emphasis with falling intonation
ok. now. well., etc.	a period indicates falling (final) intonation
so, the next thing	a comma indicates low-rising intonation suggesting continuation
e:r, the:::, etc.	one or more colons indicate lengthening of the preceding sound
SYLVIA	capitals indicate increased volume
°the next thing	degree sign indicates decreased volume
. . . . (radio)	single parentheses indicate unclear or probable item
((coughs))	double parentheses indicate comments about the transcript, including non-verbal actions
((unintelligible))	indicates a stretch of talk that is unintelligible to the analyst
no-	a hyphen indicates an abrupt cut-off, with level pitch
[si:m]	square brackets indicate phonetic transcription
<hhh>	in-drawn breath
hhh	exhaled breath
(hhh)	laughter tokens
" "	quotation marks indicate written text which is read aloud.
bon chance	italic type, when used within the actual transcription itself, indicates non-English words
two columns of text	indicate that two conversations are going on at the same time.

IDEAL 8, 1995

THE PROCESS OF PEER FEEDBACK

Timothy A. Noble

While peer feedback (also called peer revision, peer review, peer editing, or peer response) is widely used in ESL and L1 composition classes, it has sometimes been criticized because (1) some of the feedback students give may be misleading or wrong, (2) students may tend to focus too much on grammatical errors rather than on higher order concerns, and (3) students tend not to do much revision anyway. To examine these concerns, interaction during peer feedback between students in an Academic English for International Graduate Students class was recorded, transcribed, and compared with drafts written before and after the interaction. This study seeks to determine (1) the kinds of suggestions given, (2) whether or not the suggestions were incorporated into later drafts of the papers, (3) the extent to which students revised their papers, and (4) whether or not the quality of suggestions or the writers' oral responses to suggestions corresponded in any way with which suggestions were implemented in their papers.

INTRODUCTION

Many ESL writing courses now use the Process Approach as the theoretical basis for instruction. Writing is therefore seen less as the transfer of a concept from the writer's mind to paper than as a highly personal process of exploration and discovery. Since the process is regarded as recursive, revision has become an increasingly important aim of writing classes; students are encouraged to look at their work critically and consider how they can improve what they have written.

One technique commonly used to encourage revision is peer feedback. Students who have completed a draft of an essay exchange papers and give comments and suggestions to each other on how to improve the other's writing. Students are then instructed to use those comments for ideas when preparing the next draft. While this technique is widely used, some teachers have complained that (1) some of the feedback given is misleading or wrong and that (2) students tend not to do much revision anyway. This study attempts to examine these concerns as they relate to one ESL academic reading and writing course for graduate students.

While this study will probe the usefulness peer feedback, it will not give conclusive evidence either for or against the technique. For one thing, many variables are at work not only in the way peer feedback is managed but also in the way it is experienced by learners. This will be evident in the differences between how the two feedback sessions examined here were conducted and the variety in the interaction between students. In addition to the variables at work in the classroom, there is a sense in which the successful completion of a writing task, while of value in itself, is only one step in the learner's development as a writer. Not only is writing a process, but writer education is also.

CRITIQUES OF PEER FEEDBACK

Peer feedback has been widely used in L1 writing classes as a technique from the Process Approach. The motivation for its use is the hope that through sharing their writing with others in the same class, students can (1) widen their audience beyond one authority figure—the teacher, (2) get insights into their writing from their peers, (3) see how others have handled the same task, (4) develop their skills in critiquing their own papers, and (5) develop the habit of revising what they have written.

Much has been written about peer feedback (sometimes called peer revision, peer review, peer editing, or peer response), but, as Sowa (1994) notes, very little empirical research has been done. Most of what has been written consists of claims and counterclaims. Stanley (1992), in her survey of the literature, found mostly justifications for and complaints about the technique. Of the few research studies available to her, most compared teacher response to peer response to see which was more beneficial. No clear answer emerged.

Sowa (1994) found that only 45% of the comments made during peer feedback were specific and relevant. Furthermore, he claimed that local comments were often inaccurate, and that writers tended to incorporate such feedback indiscriminately in later drafts. Caulk (1994), however, found that 89% of the students gave helpful written comments in reviewing classmates' papers, and only 6% of the responses were inaccurate in his view. Moreover, 60% of the students gave "valid suggestions" which the teacher had not made in his comments. While the teacher tended to give more feedback concerning form and clarity (because he did not want to "interfere"), students commented more on content. Thus the peer responses did not substitute for the teacher's comments but were recommended as a supplement to the teacher's critique. It was suggested that the quality of the revision improved with the number of students giving feedback.

Caulk's findings confirmed those of Hedgecock and Lefkowitz (1992) who found that the group whose papers had received only peer feedback benefitted most in the areas of content, organization, and vocabulary, while those written by students who had received only teacher feedback improved most in the area of grammar. In terms of holistic ratings, neither peer feedback nor teacher feedback seemed to have been better.

Stanley (1992) found that coaching prior to the use of peer review "resulted in improved group interaction" (p. 226) and recommended the use of a series of drafts from previous semesters and role play to sensitize students to the "most effective" ways of giving feedback. The use of short discourse completion tests and class discussion has also been posited as a potential awareness-raising device (Noble, 1994).

Finally, Nelson and Murphy (1993), using global analysis and rating of papers and student interaction, found that when student interaction was rated as more cooperative it was more likely that the suggestions would be incorporated into revisions. They cautioned, however, that the degree to which students incorporate suggestions should not be considered the sole measure of the success of the technique. They note that the tone of the interaction and the identification of a writer's strengths and weaknesses are also important.

This study examines the interaction between students during two peer feedback sessions and tries to determine what kinds of suggestions were given, whether or not the suggestions were incorporated into later drafts of the papers, the extent to which students revised their papers, and whether or not the quality of suggestions or the writers' responses to suggestions corresponded in any way with which suggestions were implemented.

METHOD

During the spring 1994 semester at the University of Illinois at Urbana-Champaign, the investigator recorded two 30-minute sessions of peer feedback. The participants were graduate students from various departments who had been placed into the class on the basis of a placement test. Ten students composed the class under investigation—seven male and three female, representing four different cultural backgrounds. (See Appendix B for gender and ethnicity information.) Each wore a personal cassette recorder during the feedback sessions.

For the first session, students had written essays at home on the topic of plagiarism. (See Appendix C for the assignments.) At the beginning of class, students exchanged papers and spent 10 to 15 minutes reading them and preparing feedback. (See Appendix D for peer feedback guidelines.) Next, students met with those who had read their papers, and discussed their writing for about 15 minutes. The second draft was due at the next class meeting.

The second session differed from the first in two major respects. First, rather than composing the first draft of their papers at home, students were given 65 minutes in class to write. Peer feedback sessions followed a short break. Second, students discussed their papers longer than before (20 to 25 minutes total). These differences, in addition to the fact that the technique was new to all the students, may have affected the interaction and the revision of the papers. Furthermore, three students were absent from the second session.

The tapes of the interactions were transcribed, and copies of the pre- and post-feedback drafts were made. (One student, L8, did not turn in the first draft of his first paper, resulting in some gaps in the data.) The transcripts were examined for exchanges where the reader gave a suggestion to the writer. Pre- and post-feedback drafts of the same paper were compared, and differences were highlighted and coded (+ for additions, - for deletions, and ∆ for changes). Finally, each suggestion was coded according to (1) the quality of the suggestion (+, o, -), (2) the degree of implementation (1 = not used, 2 = some influence, 3 = suggestion implemented as given), (3) whether the suggestion was general or specific, and (4) the oral response of the writer to the feedback (A = acceptance, B = backchannel, C = silence, D = defense or questioning). In addition, each suggestion was placed into one of four categories: mechanics, style, organization, and content.

RESULTS AND DISCUSSION

Types of Suggestion

The first issue examined here concerns the kinds of suggestion made during the two sessions. Forty-four suggestion exchanges occurred in the two sessions: 26 in the first (averaging 2.6 per student) and 18 in the second (also 2.6 per student). Of these exchanges, 20 involved general suggestions, and 24 were more specific. At first glance, Sowa's findings that students focus too much on grammar seemed to be marginally supported by the data: 12 exchanges involved suggestions about mechanics (grammar and punctuation), 7 involved style (word choice, repetition, choice of sentence type), 10 involved organization (coherence, cohesion, arrangement), and 15 involved content (ideas, focus, citations, support). However, upon closer examination, it was found that 8 of the 12 grammar suggestions were made by the same learner (L10) during the first session. It was surprising that only 4 of the 33 suggestions not by L10 were grammar related, especially when one of the questions on the peer feedback guide was directly related to grammar (consistent errors). A note on the guideline cautioned students not to correct every mistake. Nevertheless, that most students made few or no comments on grammar calls into question Sowa's complaints concerning lower order error focus.

Table 1 shows the types of suggestion given in terms of their quality ratings:

Table 1

	Quality Rating†				
	+	o	-	?*	**Total**
Mechanics:					
Grammar	6	1	3	2	12
Total	6	1	3	2	12
Style:					
Style (General)	0	2	0	2	4
Word Choice	1	2	0	0	3
Total	1	4	0	2	7
Organization:					
Arrangement	0	3	0	1	4
Coherence	2	1	0	2	5
Cohesion	1	0	0	0	1
Total	3	4	0	3	10
Content:					
Idea Generation	0	1	0	0	1
Support	3	2	0	1	6
Focus	4	0	1	0	5
Citations	2	1	0	0	3
Total	9	4	1	1	15

†Quality rating codes: + means helpful, - means damaging, and o means neutral.
*Suggestions from L8's first paper could not be rated since a first draft was not turned in.

The student (L10) who focused exclusively on grammar and style (word choice) when giving feedback went through his partner's paper line by line and made suggestions and requested clarification. Excerpt 1 shows three suggestion exchanges within about 45 seconds. In this and following exchanges, relevant turns are bolded. Appendix A details the transcription conventions used through this paper.

Excerpt 1

L10 ah (6) um? "easy and in general + we can't define e-" //uh//
L7 //"easily"//
L10 "easily." a fine: ++
L7 a definition. ++
L10 ah. (hh) now **you always i- put this (.) in front of them.** ++
L7 yeah.
L10 "easily find a definition" (.) with + **I think it's with. you you want to say**
"agree with" right? (4) oh oh (.) you you (.) this "on" is for: definition,
L7 yes.
L10 ah ah okay okay. (2) **I think it's a (.) definition of** (3) °yeah (3) °"which
everyone agree ++ and which (.) covers" +
L7 "this theme." ++

In this excerpt, L10 offers three suggestions: (1) change the word order of *define easily,* (2) say *agree with,* and (3) say *definition of.* Significantly, though, fewer than half of the changes appeared in the revision of L7's paper, even though L10 had marked all the suggestions on L7's first draft. For example, of the three suggestions above, only the first is used for revision.

(Draft 1)

> To define and to protect this subject matter in detailed manner are not easy and, in general, we can't **find easily** a **definition on** which everyone **agrees** and which covers this theme in every perspective.

(Draft 2)

> To define and to protect this subject matter in detailed manner are not easy and, in general, we can't **easily find** a common **definition on** which everone **agrees** and which covers this controversial theme in every perspectives.

L10's preoccupation with grammar and style is not entirely surprising. He used his electronic dictionary constantly throughout the semester. In contrast, only one other learner made a specific suggestion concerning grammar. L1 suggested repair of a comma splice, but no repair was made by L6.

Excerpt 2

L1 mm-hm, //very good this// I I like this ++ //sentence.// <<hh>>
L6 //y- you you// //you//
L1 "scientific plagiarism is a very complicated" <<hh>> "a smart stealer
may" (hh)
L6 maybe will be //[faind] ((fined? find?))// hh
L1 //it's very//complicated, **why why didn't you: + separate**
this sentence.
L6 mm-hm, (3)

Instead of focusing on grammar points, most suggestions dealt with other problems such as need for support and organization. In excerpt 3, L2 suggests a way for L8 to develop part of his paper:

Excerpt 3

L2 you give + definition here is only definition inside United States.
L8 yeah.
L2 **you may like to mention that since in the end of this paragraph you say**
<<hh>> "other country have other definition." so what else + **here**
+ in the in the beginning is (this) + this is definition + from some ++
special f- + force. ((source?)) ++ //just// that that's not (.) not so
important (.) but
L8 //mm-hm,//
not no no. important. (3)

Though L8's first draft cannot be examined, there is evidence of implementation when we look at the second draft of the paper. The sentence quoted above, *other country have other definition,* does not occur in the paper. However, there is an extensive section on different cultural interpretations of plagiarism.

The attitude of most students toward grammar seemed to be reflected in excerpt 4, when L5 makes a general comment on the grammar in L2's first draft, but indicates that she considers grammar more of a concern for later drafts.

Excerpt 4

L2 [x:] any suggestion, any problem? (yeah)
L5 **um: ++ some: + grammar. + you should pay attention,**
L2 mm-hm,
L5 maybe you c- you c- that will be: something when you second draft.
<<hh>> tha- that's good an- + and em: (5)

One example of a suggestion concerning coherence comes from excerpt 5. L1 had just asked if there were any ideas which didn't fit into the paper (feedback guideline question 3). L7 started with a negative response, but then alluded to the following paragraph in L1's paper on the effect of a fictitious archaeological discovery on a local community.

> This type of discoveries increase the demand for books about archaeology. This cause to increase the sales of books in the book stores and writers publish new books or articals on this feild.

After the following exchange, L7's second draft omitted this paragraph entirely.

Excerpt 5

L7 yeah bu- but eh:: by the way.
L1 mm-hmm, (2)

L7 yeah I'm not sure (.) of course (.) I I don't try to impose anything but **eh**
maybe if you prefer to think about (2) this paragraph,
L1 mm-hm:,
L7 including
L1 last one?
L7 book stores //an:d//
L1 //oh okay// yeah I just want ((laughing)) I just throw it, + I
think if you want to read, you can //((unintelligible))//
L7 **//I think you could// yeah uh: yo- uh**
you could,
L1 yeah I can uh I can uh + + (click) m:: what, how do you call, I can arrange
it in a proper way. + I think it (6)

Quality of Suggestion and Implementation

Of the 41 suggestions that students offered to each other, only 4 were rated as damaging (code: -), and none of these were implemented in the revisions. Most of the suggestions were rated as either + (helpful) or o (neutral). This rating scale tended to be rather conservative, since o covered a couple of categories, namely, (a) comments which dealt with real problems, but the recommended repair was flawed; (b) comments which dealt with non-problematic stretches of text, yet the suggested repair was judged also acceptable; and (c) comments which were not clearly either an improvement or damaging. Another limitation not only of the quality ratings but also of the implementation ratings is that they are somewhat subjective. Degree of implementation is best seen on a continuum, from fully implemented to completely ignored. A continuum may not even suffice in rating the quality of suggestion, since there are two qualities which need to be taken into consideration—need for repair and repair suggested. In the end, the rough scales used was deemed adequate, since the focus of this study is primarily qualitative rather than quantitative.

Table 2

		Implementation Rating†				
		1	2	3	?	Total
Quality‡:	+	3	5	8*	0	16
	o	7	3	3	0	13
	-	4	0	0	0	4
	?	0	1	1	6	8
		14	9	12	6	41*

†Implementation rating scale: 1 = not used, 2 = some influence, 3 = suggestion implemented as given, ? = unrated because L8's first draft was not available
‡Quality rating codes: + means helpful, - means damaging, and o means neutral.
*Suggestion exchanges 15 through 18 were identical in content, and so were counted as a single suggestion in tables 2 through 4, resulting in a total of 41 suggestions.

Overall, the quality of the suggestions made was satisfactory. Helpful suggestions far outweighed misleading ones and were on a par with more neutral ones in terms of quantity. More importantly, the general trend seemed to be that the better suggestions were more likely to be implemented. Examples of suggestions rated damaging (code: -) are in excerpt 1 above, where L10 recommended changing *agree* to *agree with* and *definition on* to *definition of.* Neither of these suggestions was implemented, while an adjacent suggestion rated + (*find easily* to *easily find*) was.

Suggestion Type and Implementation

Some interaction seemed to exist between the type of suggestion and whether or not students implemented that suggestion. Suggestions involving grammar generally were not implemented as often as other suggestions, as can be seen from Table 3.

Table 3 Implementation Rating†

	1	2	3	?	Total
Mechanics	6	2	2	2	12
Style	3	0	2	2	7
Organization	1	2	5	2	10
Content:					
Support	0	5	1	0	6
Other	4	0	2	0	6
Total	14	9	12	6	41

†Implementation rating scale: 1 = not used, 2 = some influence, 3 = suggestion implemented as given, ? = unrated because L8's first draft was not available

The general trend seemed to be for writers to make changes involving organization (7 of 8 implemented to some degree) and support (under content, 5 of 6 received implementation ratings of 2, the sixth, a rating of 3).

One example of an implemented grammar suggestion rated as 2 comes again from the interaction of L10 and L7. The suggestion concerns subject-verb agreement which is in fact problematic. The quality of the suggestion was rated as a +.

Draft 1

> However we can use a broad definition which **help** us imagine that plagiarism is an act of using any idea of one without any reference to her (Reardon 1990) to give a brief idea, in sentence by sentence or with our original words, phrases.

Excerpt 6

L10 °((unintelligible)) perspective. oh oh okay I see ++ "however we can use
a board ((broad)) definition which helps us" + **y- you** forget a "s" + in:
what is this. (3)
L7 sorry?
L10 **that could use.**
L7 understand. the meaning is
L10 but I I me- I //mean//

L7 //understand.// it is: +
L10 no I mean I (.) how do you spell this (.) we //ca- I can't read.//
L7 //uh: imagine.// imagine.
L10 uh [i] measure oh. imag-

L7 ended up making a change in the right place, but rather than adding an *s*, as L10 had suggested, he added a modal, perhaps an even better solution than what had been suggested.

Draft 2

> However, we can use a broad definition which **will help** us imagine that plagiarism is an act of using any one's ideas without any reference to her study (Reardon 1990) to give a brief idea as our owns, in sentence by sentence or with our original words, slightly different phrases reflecting others ideas.

Nevertheless, the general trend (as we have seen from excerpts 1 and 2) was for grammar suggestions to be ignored.

An example of an organizational suggestion which was implemented (rating = 3) comes from excerpt 7, where L9 recommends moving two examples from the conclusion to the body of the essay.

Excerpt 7

L9 and, ++ the conclusion, + I agree too it's just that + the conclusion + is:
is geared to + (I'll see (.) you may have) ((unintelligible)). **but, I will**
include some of these example in the body.
L3 okay.
L9 **instead of + in //the// conclusion, like these example, ++**
L3 //mm-hm,//
L9 **and also this + example +** is this is the conclusion exactly about this +
first main sent- main sent- main sentence.
L3 okay.
L9 you see,
L3 mm-hm,
L9 and (.) but this part is very good.
L3 mm-hm,

The sentences in question were moved to the second paragraph.

Draft 1, conclusion

> Computer software should be used as a detector to realize the quantitative similarity and difference between the two works for further investigation. Without doubt, it is a convenient way to quantify the plagiarism. It also can speed up the process of investigating plagiarism cases. **For example, in programming courses, this kind of computer software can be efficiently**

> **employed to monitor the level of original work due to the large size of student populations.** But, the jury definitely can not use the result of this software to decide the defendant guilty or not. **Actually plagiarism is a very controversial topic to judge. Coincidence is a possible cause for similarity. In this case, any automated system will not be appropriate for the similarity detection.** Even the jury, the "smart human beings, needs to think and decide by various debates and evidence. Computer program which may combine the technologies of logic, artificial intelligence and linguistics could not handle such a complicated and deliberate task, a final decision of plagiarism.

Draft 2, second paragraph

> A computer program can work as "expert witness" to detect the similarity between two books. (Stone 1448) **In programming courses, this kind of computer software can be efficiently employed to monitor the level of original work due to the large size of student populations.** (Whale 140) Nevertheless, every programmer knows each program has its assumptions and limitations not to mention bugs. Who will take the responsibilities if there are bugs in the computer program? Who will be authorized to make the assumptions? Will the lawyers and the jury know the limitations? **Actually plagiarism is a very controversial topic to judge. Coincidence is a possible cause for similarity. In this case, any automated system will not be appropriate for the similarity detection.** Nowadays, due to the intense competition of the commercial markets, even high-tech companies are suing each other. . . .

Draft 2, conclusion

> Computer software should be used as a detector to realize the quantitative similarity and difference between the two works for further investigation. Without doubt, it is a convenient way to quantify the plagiarism. It also can speed up the process of investigating plagiarism cases. But, the jury definitely can not use the result of this software to decide the defendant guilty or not. Even the jury, the "smart human beings, needs to think and decide by various debates and evidence. Computer program which may combine the technologies of logic, artificial intelligence and linguistics could not handle such a complicated and deliberate task, a final decision of plagiarism.

One interesting thing about the peer feedback session between L3 and L9 is that the only changes which L3 made in his paper were the ones recommended by L9. In the second session, however, revisions were more extensive, though how much of that was due to the feedback sessions rather than the circumstances under which the first drafts were written is debatable.

Response to Feedback and Implementation

In general, there were no surprises when comparing the type of oral response writer's made and whether the suggestion was implemented or not. Four types of response were noted: acceptance (coded A), backchanneling (coded B), silence (coded C), and defensive or questioning response (coded D). Responses such as *yes*, *yeah*, and *okay* were coded as backchanneling unless there was other evidence in the transcript of an overt acceptance. The reason for this is that in many cultures, such a response more likely means *I understand* than *I agree;* even Americans sometimes use this type of response rather than confront in situations where they disagree with a suggestion, especially if there is a power differential.

Table 4 Implementation Rating†

		1	2	3	?	Total
Writer Response‡:	A	2	4	5	5	16
	B	7	3	6	1	17
	C	1	0	0	0	1
	D	4	2	1	0	7
Total		14	9	12	6	41

†Implementation rating scale: 1 = not used, 2 = some influence, 3 = suggestion implemented as given, ? = unrated because L8's first draft was not available
‡Writer response codes: A = acceptance, B = backchanneling, C = silence, D = defensive or questioning response.

A response of agreement (A) by a writer to the reader's suggestions tended to indicate an intention to implement the changes recommended at least to some degree. As already noted, excerpt 5 illustrated one example of L1 acknowledging a suggestion by L7.

Excerpt 5

10 L1 //oh okay// yeah I just want ((laughing)) **I just throw it,** + I think if
11 you want to read, you can //((unintelligible))//
12 L7 //I think you could// yeah uh: yo- uh you could,
13 L1 yeah I can uh I can uh ++ (click) m:: what, how do you call, **I can**
14 **arrange it in a proper way.** + I think it (6)

Another example of an acknowledged suggestion comes from an exchange between L2 and L5, where L5 in lines 3-5 makes an indirect suggestion concerning cohesion.

Excerpt 8

1 L2 //mine// just the garbage hhh to look at. heh.
2 L5 no no it's uh ++ you:r [humi:] your language skills + is goo:d <<hh>>
3 um: <<hh>> to write. since you're clear like <<hh>> I I don't +
4 think the: there's a: direct connecti- <<hh>> connection between the:
5 second graph o ++ the the //third//graph.
6 L2 //<<hh>>// yeah. the + **the second one (.)**
7 **just some idea t- from my mind,** I just t-
8 LL (hhh)

In revising the paper (as his reply in lines 6-7 suggests), L2 treats the problem as one of coherence rather than cohesion, and most of the paragraph is actually replaced.

Draft 1, second paragraph

> Whenever we face a new problem, normally there are not enough ready tools and methods to solve it. This is the first place that many inventions are made. **It is very reasonable to solve a problem in this way. First look for if there is already some method other people used to solve the same problem. Second: find out if there is a method that use for other purpose, but can be adopted for this problem. Third try to invent new method.** People make inventions not just for fun or **personally. Normally** curiosities, there is a need that new techniques must be made to help our life.

Draft 2, second paragraph

> Whenever we face a new problem, normally there are not enough tools and methods to solve it. The is the first place that many inventions are made. People make inventions not just for fun or personal curiosities, **there is a need that new techniques must be made to help our life. As the advance of science and technology, more and more research funding and research time are required for the development of new technology. It is more likely the those research that have more practical use and direct economic gain will be paid more attentions. That is why not many inventions are made originally for archaeology. Nevertheless, archaeologist can take advantage of the modern scientific product and adopt the modern technology to their research work. Since the borrowed technology may not fit into the archeologist's problem, some kinds of modification are still need to adapt for the practical problem.**

The topic of the paper was the adaptation of technology from other fields for use in archaeology. In addition to the changes noted above (in bold), L2 added other paragraphs and makes several other changes.

A few suggestions were accepted verbally but not implemented in the revision. One came from the first session, in an exchange among L5, L3, and L9. L5 had come to class late, giving L3 and L9 very little time to review her paper. Excerpt 9 shows an exchange about citations which L5 accepts (and even collaborates on). However, L5 does not implement these changes in her revision, even though she made other sentence- and word-level changes.

Excerpt 9

1 L3 this case. wh- what's this case.
2 L9 oh uh: I I don't know. I haven't read this case. (5)
3 L3 is it in (.) in the article we read?
4 L5 mm-hm,
5 L3 okay ++ so: it
6 L5 I should write down the note? //footnotes?//

L3 //yeah,// you should citation note. you should //do cita-//
L5 **//uh I haven't// did the citations.**
L3 okay.

Backchanneling (B) is an ambiguous response: It can either mean *I understand* or *I agree*. In addition, some learners may use it to just say, *Keep going*. Consequently, we would expect mixed results on the implementation of suggestions where the response was backchanneling, such as indicated by Table 4.

Excerpt 10 shows three examples of suggestions to which the writer, L7, responds by backchanneling.

Excerpt 10

L10 okay. (3) "imagine that (.) plagiarism is an:"
L7 "act"
L10 "act + of uh using any" ++
L7 "any idea." +
L10 of
L7 one,
L10 oh. you need a (better thing). one's idea, any one's idea. **is more brief.**
L7 mm-hm, ++
L10 **and it's not necessary to be idea you can s- say "ideas" because + one person could (.) have many ideas.**
L7 mm-hm:, (3)
L10 °plagiarism + any° + "any one's idea without any any reference to:"
L7 "any reference to her."
L10 yeah. (2) to him or her. + oh! okay. (3) **here we + okay ((unintelligible)) but we always put the consistent tense (.) since you put "one" here,**
L7 yes.
L10 **you'd better put a one here. because you if you put + put a her or: he people get confused.**
L7 okay. (2)

The interesting thing here is that the changes actually implemented in the paper are the ones to which L7 responds by a simple *mm-hm;* the suggestion receiving an overt *yeah* and *yes* is ignored, as shown by a comparison of the first and second drafts of the paper.

Draft 1

> However we can use a broad definition which help us imagine that plagiarism is an act of using **any idea of one** without any reference to **her** (Reardon 1990) to give a brief idea, in sentence by sentence or with our original words, phrases.

Draft 2

> However, we can use a broad definition which will help us imagine that plagiarism is an act of using **any one's ideas** without any reference to **her study**

> (Reardon 1990) to give a brief idea as our owns, in sentence by sentence or with our original words, slightly different phrases reflecting others ideas.

Clearly, a *yes* in these instances does not necessarily mean, "I will do it."

Only one instance of silence (C) followed a recommendation. This was in excerpt 1, when L10 suggested changing *definition* to *definition of*, a change which was not made.

As expected, a defensive response (D), or one in which the writer questions the reader, tended not to be implemented. In excerpt 4, L5 recommends that L2 change the style of citations because L5 is not familiar with the style used. In is case, L2 does not make the recommended changes.

Excerpt 4

<<hh>> tha- that's good an- + and em: (5) <<hh>> what's a: uh:
uh: "as descripted in:"
L2 uh: + that's the + hh reference I'm l- (.) looking for. //so bes-//
L5 //so, <<hh>>//
uh you ca:n (.) eh: + <<hh>> in the ++
L2 yeah. +
L5 i:n + //you just uh say// this (.) I I don't think this will be okay. (just) =
. . . .

L5 I don't see (.) I haven't see th- this kind of c- this condition ((citation)) here.
L2 um,
L5 I haven't met that. (hhh)
L2 actually, this kind of (.) writing's (.) very (.) normal in + in uh in (.) my
field. //because pe-// when people + try and write a paper is normally

On the other hand, a response rated D (defensive or questioning response) does not necessarily indicate that no changes will be made. In excerpt 11, L4 recommends that L3 give another example of the use of modern technology in archaeology. L3 responds by asking what other examples there were.

Excerpt 11

L3 did you fini- ++ any suggestion on + any idea I can do on ++
L4 no. ++ just uh + about the um (4) although a large number of example (.)
is fine. (.) maybe you you can just (hhh) add some + //uh example//
L3 //I sh- I shou-// [æju:]
but **what other example I can have**.

Perhaps the responses which involved explanations should not have been classified with those which questioned either the suggestion or how to implement the suggestion. However, since the two different types of response show a similar resistance to the suggestion, they were categorized together.

A final note concerning writer responses to suggestions. Sometimes combinations of different responses were made to the same suggestion, especially in longer suggestion exchanges. For coding purposes, the presence of either a defensive response or an accepting or acknowledging response overrode backchanneling behavior. There were few examples of agreement and defensive responses co-occurring. The most fascinating of these exchanges, which is too long to cover in depth here, involved L3 recommending that L4 focus more on "the effect on the community" of an archaeological find. The suggestion begins in excerpt 12.

Excerpt 12

L3 okay, + second question is: + okay: + yeah. + because I think (.) that the topic should be you know + the effect of archaeology (.) -cal discovery on community:
L4 mm.
L3 so although you have + some description of uh champana //man//
L4 //nn//
L3 but + you didn't emphasize on the effect on Champana + Champaign-Urbana community. right, in your article you didn't + men//tion about// these right,
L4 //uh:// **wh- what's that. o:n community. w- w- what does it mean.**

Throughout the discussion, L4 moves from questioning behavior (which indicates that he considers the point to be only a request for a definition) to backchanneling to, in the final moments of the class, acceptance. L4 ultimately implements the recommendation in his revision, though it takes a great deal of discussion to get L4 to that point.

Overall Revision

One of the arguments for peer feedback is that it encourages students to look at their work more critically. Thus, if peer feedback were truly successful, we might expect students to do more revision, not only on those sections of their work on which others have commented but also on their work as a whole. Since there is no control group in this study, we can only speculate about the overall effect of peer feedback. However, a couple of observations seem pertinent.

First, revision for most of the students was fairly extensive for the first paper (Plagiarism) but very extensive for the second (Archaeology). While the circumstances of writing the first draft of the archeology paper in class and under time pressure may have played a major role in this, it is also possible that the experience of peer response with the plagiarism paper had some effect on the writing processes of the students.

The second observation arises from the revisions which L7 did to his papers. As mentioned earlier, all of L10's comments focused on surface level problems (or non-problems, as the case may be). The detailed nature of the feedback resulted in the pair only being able to get through half of L7's paper. For that half of the paper, all of the changes (whether related to feedback or not) were either word- or sentence-level changes. However, in the second half of the same paper, there were two major additions plus other minor changes—higher-level modifications.

The fact that L7 made only lower level revisions on the first half of the paper, the part receiving L10's microscopic examination, suggests the following interpretation. When a student receives feedback focusing on the grammatical and lexical levels, the implication is that organization and content are O.K. If, however, the feedback focuses on discussion of higher order analysis, this does not imply that the grammatical and lexical levels do not need attention. The conclusion that suggests itself is that a focus on grammatical and lexical errors may actually inhibit higher order revision. This issue warrants further research: What effect does the kind of peer feedback and teacher comment have on revision?

It is encouraging that almost all learners in this study received mostly higher order feedback rather than comments on local errors. Furthermore, there is evidence (in excerpt 13) that at least one learner developed a process orientation through the experiences of in class writing and peer feedback.

Excerpt 13

L5 I hope I can write + I can write so [fru:nkli:]. ((fluently))
L2: no it's just junk it's just. (hhh)
L5: oh no:, + you can use the words, + very good. ++
L2: <<hh>> the lesson: the (.) the cla- uh: the thing I le- learn from this class just (.) whatever you want to write just write down them ++ afterward you is: ((click)) uh: arrange your + stuff + stuff <<hh>> because I stop + here for long time. ++ after he said, you only have thirty minutes I said okay + forget the connection just write down whatever I want s:ay. <<hh>>
L5: //mm-hm. that's good.//
L2: //that's maybe something// <<h>> from (.) //his class//
L5: //yeah write// down what you //want// right and uh <<hh>> //finally// (.) um:
L2: //yeah,// //yeah.//

IMPLICATIONS: WHAT I LEARNED ABOUT PEER EDITING

Complaints that students engaged in peer response focus too much on grammar and that they are led astray by faulty feedback were not borne out by this study. In fact, despite the one question on the peer feedback guide that dealt directly with grammatical errors, most students preferred to deal with higher order issues such as organization and content. However, the concern that students might focus too much on microscopic details seems well founded in that such feedback may inhibit revision. Should these results be confirmed by further research, it would be wise to avoid questions dealing with grammar on peer feedback guides, and teachers using peer feedback should encourage their students to focus on content and organizational issues. This would also be strong evidence that, in early drafts, teachers ought to ignore all grammatical errors which are not too serious, a position widely held now anyway.

Another concern which was not confirmed by this study was that students blindly implement suggestions regardless of quality. There was evidence that the quality of feedback corresponded at least to some degree with the likelihood that it would be implemented. The fear that peer feedback is a case of "the blind leading the blind" (Sowa 1994) seems to be exaggerated. Though there are undoubtedly instances where students give misleading feedback, the implementation of feedback seems far from indiscriminate, and helpful (or at least non-damaging) peer response seems to outweigh harmful feedback. One thing I discovered is the wealth of competence concerning writing that my students bring with them to the classroom. Though their input may not be adequate as a substitute for teacher response, it seems reasonable to conclude that it works as a satisfactory complement.

In addition, I found that a variety of factors interacted in predicting which suggestions would actually be implemented. Besides the quality of feedback, the writer's receptivity to feedback and the kind of feedback offered also played a role. The writer's receptivity could to some extent be seen through the type of response given to the reader's comments: Overt acceptance did tend to indicate openness to revision while silence (n=1), defensiveness and questioning indicated less likelihood that any changes would be made. As expected, backchanneling was shown to be neither an indication of acceptance nor rejection of the suggestion.

One factor looked at, though not examined in this paper, was the consequence of a suggestion being specific or general. The results were inconclusive in this study.

Finally, there did seem to be evidence that the experience of peer feedback was beneficial for most learners. Fears that students wouldn't revise their papers were unfounded, at least according to the results of this study. Some effect of the feedback appears in the revision of their papers, and at least one student commented that he had begun to view writing more as a process. Considering that these students had had no training in the technique prior to their first session of peer feedback, the results were very satisfactory. Though there is no guarantee that the experience of these students was typical, peer feedback did seem to contribute to their overall development as writers.

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APPENDICES

Appendix A: Transcription Conventions (adapted from van Lier, 1988)

Transcription conventions used in this study were.

T	teacher
L1, L2, etc.	identified learner
L	unidentified learner
L3?	probably learner 3 (L3)
All	several or all learners simultaneously
//yes//yah//ok//	overlapping or simultaneous listening
///huh?///oh///	responses, brief comments, etc., by two, three, or an unspecified number of learners
=	a) turn continues below, at the next identical symbol b) if inserted at the end of one speaker's turn and the beginning of the next speaker's adjacent turn, it indicates that there is no gap at all between the two turns
(+) (++) (1)	pauses; (+) = a pause of between .1 and .5 of a second; (++) = a pause of between .6 and .9 of a second; and (1) (2) (3) = pauses of one, two or three seconds respectively.
?	rising intonation, not necessarily a question
!	strong emphasis with falling intonation
ok. now. well., etc.	a period indicates falling (final) intonation
so, the next thing	a comma indicates low-rising intonation suggesting continuation
e:r, the:::, etc.	one or more colons indicate lengthening of the preceding sound
SYLVIA	capitals indicate increased volume
°the next thing	degree sign indicates decreased volume
. . . . (radio)	single parentheses indicate unclear or probable item
((coughs))	double parentheses indicate comments about the transcript, including non-verbal actions

((unintelligible))	indicates a stretch of talk that is unintelligible to the analyst
no-	a hyphen indicates an abrupt cut-off, with level pitch
[si:m]	square brackets indicate phonetic transcription
<hhh>	in-drawn breath
hhh	exhaled breath
(hhh)	laughter tokens
" "	quotation marks indicate written text which is read aloud.
bon chance	italic type, when used within the actual transcription itself, indicates non-English words
two columns of text	indicate that two conversations are going on at the same time.

Appendix B: Students

L1: Sri Lankan Female (Sinhala)
L2: Chinese Male
L3: Chinese Male
L4: Chinese Male
L5: Chinese Female
L6: Chinese Female
L7: Turkish Male
L8: Paraguayan Male
L9: Venezuelan Male
L10: Chinese Male

Appendix C: Assignments

Plagiarism Unit

Homework: Write a 3-4 page paper on plagiarism. Some suggested topics:

1. Compare and contrast plagiarism in the U.S. and your country.
2. Should computer technology be employed in court cases involving plagiarism? What might be some of the ethical implications?
3. Critique the current plagiarism policy of the University of Illinois. Be sure to suggest an alternative.
4. Take one of the plagiarism cases you have read about and either defend the person accused of plagiarism or explain why they were in the wrong.
5. Are penalties for plagiarism excessive? What would be appropriate penalties?

Iceman Unit

Homework: Read the following three topics and choose *one* of them to write about. Remember, your essay should show some understanding of cause-effect construction of arguments, proper use of sources, and some organizational skill. Of course, the most important thing is to get ideas down on paper. You will *not* have to write an abstract until you write your second draft. You will have 65 minutes to write this first draft.

1. You are a sociologist who is studying the effects of archaeological discoveries on communities. Discuss the possible effects on the Champaign-Urbana community of the recent discovery, "Chambana Man." Be sure to refer to other discoveries you have read about and the effects they have had.

2. It is said that "necessity is the mother of invention." This means that many inventions are made based on needs, such as an exploratory problem for which the proper tool does not exist. Discuss the technology which has been used in archaeological discoveries and how tools have been invented and/or adapted to meet the needs of uncovering the secrets of these discoveries.
3. Imagine you have just read an article by a Dr. Ebenezer Smith which complains that too much money is wasted on archaeology. Write an article which demonstrates how recent discoveries are affecting our understanding of ancient cultures and, if you want, any implications it may have for our society.

Appendix D: Peer Feedback Guides

Peer Editing Guide — Plagiarism unit paper

Instructions: First read casually through the paper. Then use the guide below to respond. Use pencil. Put your initials in the top left corner of the paper.

1. Write what you think the thesis statement is. Remember, it is not necessarily stated explicitly. The paper should have a clear introduction, body and conclusion. Place a capital "I" in the margin next to where the introduction begins, a capital "B" in the margin next to where the body/support begins, and a capital "C" in the margin next to where the conclusion/summary begins.
2. Look at the citations. Are all direct quotes in quotation marks? Are the paraphrases sufficiently different from the original? Are there any uncited uses of sources? Are the citations in the proper form?
3. Are there any sentences you don't understand? Mark those places and put a question mark next to them.
4. Can you identify any grammatical or lexical (vocabulary) errors *which are consistently repeated throughout the paper?*

Note: Do **not** correct every mistake you find. Remember, you are reading a rough draft. Only discuss a mistake if it keeps you from understanding the meaning of the writer or is made several times in the paper.

Peer Editing Guide — Iceman unit paper

1. What do you like about your partner's paper?
2. Which ideas would you suggest s/he expand on?
3. Are there any ideas which you feel don't "fit" into the paper?
4. Is there anything you don't understand?
5. Is there anything you disagree with or feel needs better support?
6. Other suggestions?

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